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The Whole ART of  
**HUSBANDRY:**  
Or, The Way of  
*Managing and Improving*  
O F  
**LAND.**

Being a full COLLECTION of what hath been  
Writ, either by Ancient or Modern Authors :  
With many Additions of New Experiments and  
Improvements not treated of by others.

**A S A L S O**

An ACCOUNT of the particular Sorts of  
*Husbandry* used in several Counties; with Propo-  
sals for its farther Improvement.

To which is added,  
The Country-Man's Kalendar, what he is to do  
every Month in the Year.

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**The SECOND VOLUME.**

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By **J. MORTIMER**, *Esq*; F. R. S.

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The Fifth EDITION, with ADDITIONS.

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**L O N D O N :**

Printed by J. B. for **R. ROBINSON** at the *Golden Lion*,  
and **G. MORTLOCK** at the *Phoenix* in *St. Paul's*  
Church-Yard. **M. DCC. XXI.**



THE HISTORY OF THE  
MEDICAL AND PHYSICAL SCIENCES  
OF  
J A N D

By the Hon. the President of the Royal Society  
of London, Sir Isaac Newton, Bart.  
F.R.S. &c.

4804

In a Letter to the Hon. the President of the Royal Society  
of London, Sir Isaac Newton, Bart. F.R.S. &c.  
on the subject of the History of the Medical and Physical Sciences

The Hon. the President of the Royal Society of London  
has been pleased to order that this History should be printed

By the Royal Society of London

Printed by W. Stansfeld, Printer to the Royal Society, at the Royal Society's Office, in Pall Mall

1727

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1727





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## *Advertisement.*

**A**LL Gentlemen who have Collected any Observations relating to Husbandry, and the Improvement of Lands, are desired to transmit the same to the Author hereof, directing their Letters to be left with *G. Mortlock*, or *R. Robinson*, Booksellers in *St. Paul's Church-Yard*, and such Observations shall be Printed in the next Edition of this Book, for the good of the Publick.





The ART of  
**HUSBANDRY:**  
Or, The Way of Improving of  
**LAND.**

---

**B O O K XI.**

---

Chap. I. *Of the Benefit of Raising, Planting, and Propagating all sorts of Timber, and other Trees, useful either in Building or other mechanick Uses.*



**W**HEN we consider that Trade, Riches, and Strength are inseparable, and that their great Dependance is upon our Navy, we might have hoped so great a Concern to the Nation should have occasioned a greater Care in propagating and preserving of Timber, that is of principal Use to support it. And though we cannot expect to find many in this Age publick-spirited enough to have such a regard to the general Good, as to prefer it before their private Interest; yet the particular Profit that Timber brings to the Owners of it, as well as its Advantage to the Publick, might, if it had not caused more



## *The Art of Husbandry: Or,*

Care in propagating of it, have at least prevented those that have had Opportunities of experiencing its Advantage from making that Destruction and general Spoil, that hath every where of late been made of Woods, had they kept particular Accounts of the Profit, or been able to make a true Judgment of their own Advantage, which, I think, in most Places to exceed that of the Plough, or most other sorts of Husbandry; for I have my self transplanted an Elm, that in twenty Years time had above twenty Foot of Timber in it, and must have had a great deal more had it not been transplanted; where the Soil and other Circumstances were proper for it: For without a due Consideration of Particulars, no great Advantage can be expected from this, or any other sort of Husbandry; and though Art may improve Nature, yet the forcing of it commonly requires more Cost and Labour than will turn to the Advantage of the Undertaker. And therefore, as 'tis from an Application of such Things as are agreeable to each other, that Profit must proceed, I shall endeavour according to such Method, to give the best Information I can, of such Things as may be most for the Advantage and Incouragement of the Planter and Farmer.

And therefore, as Trees are of several Sorts, and for several Uses, as some for Building, Utensils, and Fuel; and others for Fruit, Ornament, and Pleasure; and that some are raised of Seeds, as the Oak, Chestnut, Ash, &c. and some spring from the Roots, as Elm, Alder, and others; and some are raised of Sets, as Willows, Oziers, and the like: And considering that some Trees, even those that are the most useful, have been lately cultivated amongst us, and that there are more that will deserve the Care of our Propagation, I shall not tie my self up only to the common Sort, but add something for the Improvement of such kind of Trees, as may be of use, though not commonly known amongst us, that so there may be



an Improvement of the Species, as well as of the way of ordering of them, which work, though 'tis so well performed by that learned and ingenious Gentleman Mr. *Evelyn*, that it may justly be thought needless for me to meddle with this Subject; yet as the design I first proposed, was a compleat System of Husbandry, and that there are several Things for the Improvement of this part of it, that I could not otherways have had an opportunity of mentioning and getting Intelligence about, that I think none have treated of yet, I was upon this account under a Necessity of making a small Treatise of this Subject, pursuant to something of a different Method than hath hitherto been done; what I shall meddle with being but a small part of what Mr. *Evelyn* hath done, and I shall take Care in the following Design to avoid as much as I can, what may any Ways be prejudicial to one that deserves the chief Honour of so useful a Subject, he having been the only Promoter of this advantageous Part of Husbandry.

For the Propagation of Trees, I shall not recommend the waiting for a spontaneous Product, except where the Ground is very full of Roots and young Wood, because of the length of Time that such Production requires, and because that neither Planting nor Sowing are any hindrance to it; nor shall I determine in this Place which is the best way of raising of Trees by Seed, or by the Transplantation of such, as we find to have raised themselves from the Seed, or that spring from the Mother-roots of other Trees, because I shall have an occasion to mention it hereafter, and to give an account of several particular Experiments relating to each several Way. I shall therefore begin with the raising of Trees by Seed, as being what must of Necessity be the first Work in most places, because other Trees are not to be had to make Plantations with; in order to which, it will be necessary first to treat,



WHICH being the Foundation of this Work, and there being such a vast difference between the growth of some Woods and others, upon the account of the Ground they grow upon, it may be necessary (tho' I shall have occasion hereafter to treat of the particular Soil that each Plant requires) to premise some general Rules concerning it; for though Trees will many times thrive on coarse Land; yet the best Sort of Lands for most Trees is the deepest and richest Soil, which always produces the tallest Trees, all Trees commonly growing shrubby, unfruitful or spreading of their tops, where the Soil is either dry or shallow: And tho' some Trees covet to run just under the Surface, yet I think 'tis generally occasion'd from a want of depth of Earth; and where there is not a sufficient depth to cool the Roots and keep them moist, they are neither lasting nor prosperous, though some Trees, as Beech, Hazel, Holly, &c. affect gravel and sandy Land, and Aquaticks moist and boggy; yet for the most profitable and useful Timber, 'tis necessary to have a deep Soil, and in such places Trees do no hurt to the Land by sucking of the Heart away from any thing that shall be sown upon it. However, I am not for imploying of Land worth twenty or thirty Shillings an Acre for this use, farther than by planting of the Hedge-rows, because many sorts of Lands not worth above five or ten Shillings *per* Acre, are near as good; nay, there are some sorts of Lands that are not very good for either Corn or Grass, that will bear very good Trees, as some of the hazelly Brick-earths in *Essex*, and some sorts of heathy Lands. Some Earths have a good Soil above, and underneath Gravel, Sand, Stones, Slate, cold barren Clays, and cold Springs, &c. and therefore a Planter or Raiser of Trees ought to consider the under Soil, as well as the superficies of the

Earth,

Earth, and to observe that the worse your Land is, the worse it will be for transplanting; and therefore the raising of Trees by Seed on barren Lands is much to be preferred, because it allies them to it, and makes both the Plant and the Soil the more natural to each other; but seeing all sorts of Lands shew what they are inclined to by their natural Product, and what the profit will be by the growth of the Trees, and the Shoots they make, it will be best to suit your Seeds, and your Soil one to another, and likewise to calculate your Profit by the same Rule. Tho' even in this Case, too great Additions and Helps may be afforded to Nature with a little cost and labour, as I shall have occasion to shew hereafter.

---

Chap. III. *Of Seeds.*

CHuse such Seeds as are mature, ponderous and sound, and that easily shake from the Boughs being taken from the tops of the youngest and most thriving Trees, and gathered when they are ready to fall, which doth for the most part direct the best time for the sowing of them, (which for most sorts of Seeds is about *November*) except your Land is very cold or moist, there a vernal sowing may be better; Acorns, Mast, and other Seeds, being what may be kept well for the Spring Season, by being barrell'd or potted up with moist Sand or Earth, and laid S. S. S. during the Winter, at the end of which, you will find them sprouted, which being committed to the Earth by a careful hand, will be as apt to take, as if sown earlier; and by this means better escape the Vermin, who are very greedy of spoiling the Winter sown Seed, and they are not so easily damaged by the increasing heat, as those sown in the beginning of Winter, especially in loose hot Grounds; and therefore, if you have occasion to preserve much Seed, chuse a fit piece of

B 3

Ground,



Ground, and with Boards raise it three foot high, and lay the first lay with fine Earth about a foot thick, and another lay of Seeds, Acorns, Mast, Keys, Nuts, Haws, &c. promiscuously or separated with a little Mould sprinkled amongst them, and let the third or upper lay be of Earth or Sand, or you may bury the Seeds in dry Sand or pulveriz'd Earth, either barrell'd or laid in heaps in some deep Cellar to preserve them from the rigour of the Winter. If your Seeds be gathered in moist weather, lay them a drying, and so keep them till you sow them, which may be as soon after *Christmas* as you please; but if they spire out before you sow them, be sure to commit them to the Earth before the Sprouts grow dry.

As for the medicating or steeping of Seeds, or the enforcing or enriching of the Earth by Compost, &c. for Trees of this kind, 'tis a charge that would much discourage the Work, and what is needless, because if one sort of Mould be not proper for one kind of Tree, it may be for another; but if your Seeds or Kernels prove extraordinary dry, if you lay them twenty four hours in Milk or Water, only impregnated with a little Cow-dung, it may do well to forward their sprouting, especially if you have been hindred from the former Preparation.

*What Seeds  
are best.*

The shape and weight of the Seeds inform you which are the best, and how they may be set, most of them, when they fall, lying on one side with their small end to the Earth, from which part they put forth the Root first, which when it hath laid hold of the Ground, from the same place sends forth the Shoot for the Tree; and if they be heavy Seeds, sow them the deeper, as Acorns, Chesnuts, Walnuts, Peaches, Apricocks, &c. about two or three Inches deep: But if light Seed, as Elm, Lime, &c. cover them only with a little Mould about half an Inch deep.

Try all sorts of Seeds, and by their thriving you'll best discern what are the most proper kind for your Land, and of such make the main of your Plantation,  
which

which Sorts you may have some Guess at by what you find your Land naturally to produce most.

Being thus provided with Seeds of all kinds, you <sup>Of raising  
Trees of  
Seed.</sup> may raise Woods or Groves immediately from them, which I think the best way, where you design a large Plantation, and resolve to employ the Land for no other use, and to keep it well fenced. First, Because they take soonest. Secondly, Because they make the straightest and most uniform Shoot. Thirdly, Because they will neither require staking nor watering (which are two very considerable Articles); And, lastly, for that all transplanting (tho' it much improve Fruit-trees) unless they are taken up the first Year or two, is a considerable impediment to the growth of Forest-trees, unless where they are removed from a very barren Soil to a rich, and meet with a very moist Summer, especially in the transplanting of the Chesnut, Walnut, and some others, that I shall have occasion particularly to mention afterwards; but if you design a transplantation of Trees, it is best to raise them in your Seminaries and Nurseries first; by which means you may transplant them as you please, for Coppice-ground, Walks, Hedges, Rows, &c. therefore I shall refer what I have farther to say about the raising, transplanting and managing of them, to the particular ordering of them in the Seminary and Nursery.



*Chap. IV. Of the Seminary and Nursery of Forest-Trees.*

**F**OR a Seminary or Nursery of Forest-trees, which is what I only design to treat of here, it is what will be thought by many not worth the taking of Pains about; but the small cost that attends it, and the small Quantity of Land requisite for such a use, with the Advantage you will find by it in filling up your Hedge-rows, and other waste uncultivated Places, will quickly convince you of its usefulness, and therefore having made choice of your Seeds, chuse out some fit piece of Ground that is well fenced, respecting the South East, rather than the South, and well sheltered from the North and West. Let it be cleared of all trumpery, and if large, it may be plowed up first, because it will make it dig the easier, and after that, I would have it dug up two spits deep, and all the upper part or surface of the Earth cast undermost, and the under Spit laid above, where the Soil is deep enough to bear it; which tho' it may be a charge at first, it will abundantly answer in the growth of Trees afterwards, because they will every where have loose Earth to root in, and the best of the Soil under them, all Trees shooting of their Roots most downwards, which is the only way I would have Trees advanced in their growth in Nurseries, and not by mending or improving of the Land by Dung, &c. as the Gardeners commonly do for their own Profit, and not the buyers, because of the difficulty that you will meet with in making such Trees to grow, if you should have occasion to remove them to a worse Soil: And if your Nursery be dug up the Winter before you sow or plant it, so as to give a Winter and Summer fallowing to make it mellow and fine, it will do well. At one end or side of which make some small Beds of about a Yard wide, leaving a small Path between them for the Seminary; cross the Beds, make some small  
Trenches

Trenches at about a Foot distance, into which throw the Seeds, but not too thick, covering them with a Rake, according to the depth before directed; but if you design the raising of Oaks, Walnuts, Chesnuts, &c. the best way is to set them as they do Beans, and at about a Foot distance, which is to be done about the latter end of *October* for the Autumnal sowing, and in *February* for the Vernal; six Bushels of Acorns will sow or plant an Acre of Land at a Foot distance, which I think enough in the Seminary, because they should be weeded by hand, and the spaces between the Beds will give room enough to come at them.

If your Nursery is of a Gravelly, Stony Soil you'll do well to pick out the Stones as often as you dig it; for Stones, lying near the Roots of Trees, do often fret and gall them, and spoil not only the Roots, but also occasion Cankers; and likewise, if you mix Clay or brick Earth with it, or Marle to make the soil deeper, especially your Nursery being a shallow Soil and apt to burn in Summer. What Plants you gather or draw out of Woods plant immediately, for their Roots are very apt to mortifie or harden and wither by the wind and cold air, because of their coming from a warm Situation.

When your Plants begin to peep, Earth them up, especially after great Frosts, at which time, the swelling Earth is apt to spue them forth, and when they are about an Inch above Ground, you may in a moist Season draw them up where you find them too thick, and set them in such places as you have occasion to bestow them in.

Your Seedlings having stood till *June*, bestow a weeding or a slight hoeing upon them, and scatter a little mungy Straw, Fern, rotten Beans, &c. amongst them, to prevent the Roots from scorching, and to receive the moisture that falls; and in *March* following, by which time it will be rotten, chop it to pieces, and mix it with the Earth, which continue to do for two or three Years successively, for till then,  
the



the substance of the Kernel will hardly be spent in the Plant : After which you may transplant them as you please, only the younger they are removed after they are three Years old, the better they will grow. At the removing of them you must consider whether the Place you design them for be secure to keep Cattle from them while young ; but if not, and you design to plant them where Cattle come, it will be best first to remove them into your Nursery, where you may plant them in Rows three Foot distant, and the Trees in the Rows to be at least two Foot distant from each other, because else you will be apt to cut the Roots in taking of them up ; in these Rows you may let them stand till they are big enough to plant out, so as by the help of some Stakes or Bushes put about them, they may in a short time be able to defend themselves from Cattle, the not taking care of which particular has been a great discouragement to several Planters. Some at the first transplanting of their Trees out of their Seminaries cut them off about an Inch from the Ground, and plant them like Quick ; but 'tis not a good way for any sort of Trees that have a large Pith, or that you design for Timber-trees, because it lets the Water into the one, and spoils the But-end of the other, which is the principal part of the Tree, by diverting the Pith, and by consequence, the Grain of the Wood too, and so hinders it from running clear if you should have occasion to cleave it into Lathes, Pales, &c. and therefore I am only for pruning up the side Boughs ; but about the Transplantation of Trees and the pruning of them, &c. I shall have occasion to take notice afterwards ; only you must observe, that having transplanted your Seedlings into a Nursery, they ought still to be kept clean from Weeds, and also the Ground to be kept loose, that the Roots may spread the better, and therefore in the next *Autumn*, before the Leaf is off, your Nursery ought to be digged a small Spit deep once a Year, only in Spring or Summer you must pull or hove up the Weeds as need



need requires; and I propose the digging amongst the Trees, while the Leaf is on, because if it be done while the Sap is up, if a Root should happen to be cut it will shoot out again, perhaps two for one; but after the Sap is once down, if a Root be cut it will not shoot forth that Winter; however be not too early in the Season, nor yet too careless of the Roots; and between the Rows you may plant Beans, Pease, or sow them with Turneps to prevent Weeds from coming up, which if any do, they should be howed up in *June*, and laid about the Roots of the Trees to rot and to keep them moist.

Many Trees may also be propagated by Layers, the *Trees of* Ever-greens about *Bartholomew Tide*, and other Trees *Layers.* about *February*, which is done by flitting of the Branches a little way, and laying of them half a Foot under Mould, with which, if some of the Earth that is in hollow Trees be mixed, or some Pigeons Dung, or if you water the Layers (where the Plants are such as you are curious of) with the Grounds of Beer or Ale, it will make them strike Root the better, and if they comply not well, peg them down with a Hook or two, and when you find them compleatly rooted, the next Winter cut them off from the main Plant, and plant them forth in your Seminary or Nursery, as is before directed about Seedlings; others twist the Branch or bare the Rind, and if 'tis out of the Reach of the Ground they fasten a Tub or Basket near the Branch, which they fill with good mould, and lay the Branch in it.

Some Trees are raised of Cuttings taken from the *Trees of* young Shoots, the best of which are those Suckers *Cuttings.* that spring from the Roots (except 'tis a grafted Tree that you design to have Cuttings from) the Cuttings must be set a Foot deep in the Earth in a moist shady place, as near as you can, and stand near a Foot out; but if they are of soft Wood, as Willow, Poplar, Alder, &c. 'tis best to take large Truncheons, so tall as that they may head above the reach of Cattle; and if



if you raise your Trees of such sorts as bear a Knur or burry swelling, set that part into the Ground, and make the hole wide, paring the end of the Cutting so smooth that no part of the Bark may be strip'd up in setting; and keeping the Ground moist about it, it will seldom fail of putting out Roots and growing.

*Trees raised by Suckers.* Many sorts of Trees may be propagated from Suckers coming from the Roots of other Trees, to cause which, dig about their Roots early in the Spring, and finding such as with a little cutting may be bent upwards, raise them above Ground three or four Inches, and in a short time they will send forth Suckers fit for transplantation; or you may split some of the Roots with Wedges, or break them, &c. and covering of them with fresh Mould they will quickly sprout out, which is one of the best ways of raising Elms and some other sorts of Trees; but these things I shall particularly mention hereafter.

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### Chap. V. *Of the Oak.*

**I** Shall begin with the *Oak*, as affording the most useful and best sort of Timber, especially for the building of Ships, and what was, of all others, the most esteemed amongst the *Romans*, of which there are several Species in several parts of the World; but Mr. *Evelyn* takes notice only of four sorts, two of which he reckons the most common in *England*, viz. the *Quercus Urbana*, which he esteemeth the tallest, being clean, and of a smooth Bark; and the *Robur* or *Quercus Sylvestris*, which hath a kind of a black Grain, and bears a smaller Acorn, spreading forth its Roots and Branches more than the other, and keeping of its Leaves all Winter; these differences I know variety of Soil will produce, and that the more thriving an Oak is, the more sappy it will be, and the longer the Leaves will hang on it; and therefore whether these marks are distinguishing of the Species I shall not determine, but rather advise the gathering of your Acorns from such a Tree as you like the kind and sort of best.

The



The Oak may be propagated by Layers, but not *How raised.* to that advantage of bulk and stature as from the Seed; nor can it be so well transplanted as it may be raised from the Acorn: But where you design transplanting of them for Walks, Groves, or into Hedge-rows, or other places where Cattle come, they should be often transplanted; and the best way to make them bear, it is to raise them first from Acorns in your Seminaries and after three Years growth to transplant them into your Nursery, ordering them as is shewed already, where you may let them stand seven or eight Years, or till they are about seven or eight foot high, according to their bigness and growth, and then remove them, as you have occasion, without which care, most Trees are very difficult to remove that are raised of Seed; the reason of which is, because 'tis the nature of all such Trees to put forth one downright Root first, and not the side Roots till the Tap-root is got near the bottom of the Soil, especially in a loose hollow Ground, and so the main Roots going deep, the small Roots, which are the chief nourishers of the Tree, lie so deep that you cannot come at them to take them up, but, if you take them up young, while the Tap root is small and not shot too far down, you may, by cutting off the Tap-root about a Foot long, cause it to branch near the Top of the Earth, which will give you the advantage of taking of it up with small Roots when 'tis removed again.

But some, to prevent this Inconveniency, put under all the Trees they raise of Seed about three or four Inches below the place where they sow their Seeds, a small piece of Tile to stop the running down of the Tap-root, which occasions it to branch when it comes to the Tile, which is a very good way, and will much increase the number of the small Roots, and is a great help to its transplantation, and many say, that it much helps a Tree where 'tis not removed, but suffered to grow from the Seed.

The best time for the removing of Oaks and all other Trees that shed their Leaves in Winter, is in *Removing of them.* October,



*October*, as soon as the Leaf begins to fall, or in *February* just before the Sap begins to rise; and take Care in planting of them, not to set them deeper than they stood before, for if the Roots be sufficiently covered so as to keep the Body steady and erect 'tis enough. The Position likewise of the Tree ought to be carefully observed, for the southern Side of the Tree being more dilated, and the Pores more exposed to the heat of the Sun by a sudden Transposition of the Tree in a cold time of the Year, the Tree will be very much prejudiced.

*Soil.*

The Oak thrives best on the richest Clay, though it will grow well on moist Gravel, or the coldest Clay, which most other Trees abhor, and even in some places strike Root between Rocks and Stones, and grow almost upon any kind of Land, and will penetrate strangely to come at a marly Bottom, and often make stands as they encounter variety of Footing, and sometimes proceed vigorously again; and as they either penetrate beyond, or out-grow their Obstructions, or meet with better Earth. But the best Timber for Ships is that which grows on the stiffest Land, it being the most solid, tough and durable; whereas what grows on light Land is light and brittle, and not of a solid Grain, which though 'tis best for the Joyner's use, is not of the value of the other for Ships and Building; but 'tis in the most southern warm Parts of *England* that they thrive best in stiff Clay, and not so well in the northern Parts, because they have not so much the heat of the Sun to warm those cold Soils; for Oaks, as to the Soil and Temperature of the Air, as *Vitruvius* well observes, neither prosper in very hot Countries, nor very Cold, but affect a temperate Climate, which I suppose is the Reason of our *English* Oaks so much out-doing those of all other Countries: And where Oaks grow naturally and in abundance, it is a sign of their being good, their liking the Soil, and also of their Soil being rich.



If you would propagate them for Timber, do not cut off their Heads, nor be too busy in lopping of them, except it be of fear and unthrifty Branches, or that you are to remove them from a good Soil to a bad, in which case 'tis necessary to have as much Root and as little Top as you can, or that you desire them for Shade, bearing of Mast, or for Fuel.

'Tis needless to mention either the usefulness of *its uses.* Oak for the building of Houses and Ships, or to shew how much our *English* Oak exceeds that of all other Countries for that use, some of it being so tough that our sharpest Tools will scarcely enter it, nor the Fire it self consume it but slowly, as having something of a ferruginous metalline shining Nature, proper for robust Uses: It is doubtless of all Timber hitherto known the most universally useful and strong; for though some Trees be harder, as Box, Cornuz, Ebony, and divers *Indian* Woods, yet we find them more fragil, and not so well qualified for the support of great Weights, nor any Timber so lasting, where 'tis to lie sometimes wet and sometimes dry. The fine clear grained Oak, if it be of a tough kind, is best for the support of Burdens, as for Columns, Summers, &c. except the Oak that is of a twisted Grain, which may easily be discerned by the Texture of the Bark. And the more tender sort of a fine clear Bark, as being the best to cleave, is the most useful for Pales, Laths, Coopers-Ware, Shingles, Wainscot, Wheel-spoakes, Pins, &c. as the knottiest and coarsest is best for Water-works and Piles, because it lasts longest and drives best; and the crooked Oak, if firm, is best for Knee-timber in Ships, for Mill-wheels, &c. And the knot of an old Oak just where a large Arm joins to the stem, is often finely veined like Walnut. And if the planting of Oaks were more in use for under Woods, it would spoil the Coopers Trade for the making of Hoops, either of Hasle or Ash, because one Hoop made of the young Shoots of a Ground-Oak, would out-last six of the best Ash. The smaller Trunche-  
ons



ons and Spray makes Billet, Bavine, and Coals, and the Bark is of price with the Tanner and Dyer, to whom the very Saw-dust is of use; and the *Uve Fungus's* to make Tinder of. Oaks bear also a kind of a Knur of a cottony Matter, which was used of old for Wicks of Lamps and Candles. *Prævotirs* in his *Remedia Selectiora* mentions an Oyl extracted chymically *è quercina Glандe*, which continues the longest of any whatsoever, so that an Ounce of it can scarcely be consumed in a Month, though kept continually Burning; and Mr. *Josselin* in his *New England Rarities*, says, that they there make an Oyl of the Acorn growing on the white Oak, by taking of the rottenest Maple-wood and burning of it to Ashes, of which they make a strong Lye, wherein they boil the Acorns till the Oyl swims on the top in great Quantities, which they put into Bladders to anoint their Limbs with, which it exceedingly corroborates and strengthens, and serves them to eat with their Meat, being exceedingly clear and sweet Oyl; which, perhaps, is what our Acorns will produce too: If not, I think it would be of use to procure some of those Acorns to plant here, which may be easily done by them that have a Correspondency there. *Varro* says, they made Salt of Oak Ashes, and sometimes seasoned Meat with it, but more frequently sprinkled it among their Seed-corn to make it fruitful; and Acorns are of great use for the fattening of Hogs, Deer, Poultry, &c. and formerly served for the Repast of Men too.

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### Chap. VI. *Of the Elm.*

**E**LMs are of several Sorts, and differ much according to the Soil and Climate they grow in. The sorts most worth our Care and Culture are, *First*, the common Elm, which hath a very rough Bark and Leaf, some of which are of a rounder Form than others; this sort of Tree grows to a very great Height and Bigness, especially those that have the roundest



roundest sort of Leaves. *Secondly*, That which they call the Witch-elm, which kind in Bigness and Height is like to the first sort, only it hath a much smoother Bark, and in many places is putting forth Burrs and Knobs, the Leaf being also smooth and long, and varies much for Breadth and Length according to the Soil it grows in. The third sort of Elm is by some called the Witch-hassel or Broad-leaved Elm, the Body and Boughs of which have a smooth Bark like the Witch-elm, and the Shoot and Leaf is much like that of the Hassel; upon which account, I suppose, it hath its Name: The Leaves in some Soils are of a very great size, and where it thrives it will make very large Shoots. I have one of these sort of Elms that I brought out of *Derbyshire*, in my Nursery, that hath Leaves near six Inches long, and about five broad. It every Year sends forth Shoots of fourteen or fifteen Foot long. It will grow to a great bigness, being the quickest grower of any kind of Elm, but 'tis not so apt to spire up as the other sorts, being more inclined to branch into Arms.

Elms may be propagated by Seeds, which are ripe *How raised.* about the latter end of *March*, or beginning of *April*, which gather and lay in a Room to dry a day or two, and then sprinkle them in Beds prepared with good fresh Earth, sifting some of the finest Mould thinly over them, and water them as need requires. When they are come an Inch above the Ground, which they may do in four or five Months time, sift some more fine Earth about them to establish them, keeping of them clean weeded for the two first Years, and the side Boughs trimmed up till they are fit to remove into the Nursery to be placed at wider Distances, and from thence to be removed to such Places as you have occasion to plant them in. But the taking of such up as are of a plantable size from Hedge-rows and Woods is much more easie and expeditious; they not being apt to run down with a Tap-root, like an Oak, makes them more easy to transplant; only those that you

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take out of Woods, as they stand there very warm, will not thrive so well if they are planted directly into an open place, as if you plant them first into your Nursery for two or three Years, and from thence transplant them to Avenues, Hedge-rows, &c.

*Of Layers  
or Suckers.*

Elms may likewise be produced of *Layers* from a Mother-plant, as is before directed, or from *Suckers* taken off from the Mother-roots of great Trees after the Earth hath been well loosened from them. Or if such Stubs as have been felled be fenced in so far as the Roots extend, they will furnish plenty of young Plants, which may be transplanted from the first Year or second successively, by slipping of them from the old Roots. I shall not trouble you about the raising of them of Truncheons or Lops, because I could never find them to take; only sometimes some of the smallest Suckers, when the Sap is newly stirring in them, if they are split off from the Tree, will grow, though not rooted.

*By Trenches.*

Another way is to sink *Trenches* at ten or twenty Foot distance from Elms that stand in Hedge-rows in such order as you desire they should grow; and where these Gutters are, many young Elms will spring from the small Roots of the adjoining Trees, which after one Year being cut off from the Mother-roots with a sharp Spade, if you transplant them they will prove good Trees without doing any Injury to the old ones.

There is a fourth way no less expeditious and successful, by baring some of the chief Roots of a thriving Tree within a Foot of the Trunk, and chopping the same with an Ax, or making some small Clefts in them with Wedges, into which Clefts put some Stones to prevent the Clefts closing again, and to give access to the Wet, which cover three or four Inches thick with good Mould; and one single Elm thus managed will be a good Nursery, whose Suckers after two or three Years you may separate and plant out as you see occasion.



The best time for the transplantation of Elms is *Of removing of them.* in *October* or *February* : Of all Trees that grow there is none that better suffers Transplantation than the Elm doth, for you may remove them of what bigness you will, even of twenty or thirty Years growth; nay, if they are planted in a good Soil, I think those of eight or ten Inches circumference to grow better than smaller ones, provided the Bark be smooth, tender and void of Wens, unless they are removed at the first taking of them off from the Mother-roots, if they are of any great Bigness when you remove them. You must totally disbranch them, leaving only the Summit entire, unless the Soil be very good; it may be necessary to head them too, but then it will be convenient, as soon as you can, to leave a leading Branch near the Top to spire up and cover the Wound; for Elm being a soft Wood, the Wet is apt to sink into it and to spoil the Tree. They must be taken up with as much Earth and Roots as you can, and have a great deal of watering; and the sooner they are removed after the taking of them up the better, except you speedily lay them in a Trench and cover them with Mould 'till you have time to transplant them: They should be planted on the Surface of the Earth, it being a very great Error, in any Soil, to plant Trees deep, and let the Roots be handsomely spread, and the Trees well staked and defended from Cattel: They delight to grow the nearest together of any Trees, which causes them to run up spiring, and protects them from the Winds.

The Elm thrives best in a rich black Mould; especially where they can at some depth meet with some *Soil.* refreshing Springs or Moisture, and will grow almost on any sort of Land; and though they thrive not so well in too dry, sandy, or hot Ground, or those that are too cold or boggy, yet where the Earth is a little elevated above these Annoyances, you will find them to thrive upon the worst Land, as may be observed in several bad Soils, where Mounds and Banks



are cast up, especially some sort of Witch-elms, which in many Places grow on the driest Gravel, though not to any great Advantage.

Mr. Moore, in his Natural History of *Northamptonshire*, says, that at a place called *Cranford*, if you inclose any Ground that has had a Witch-elm in it, and newly cut up, in twenty one Years a Grove will grow from the Roots fit for most uses in that cold Clay, which this Tree seems properest for, few other Trees liking to grow in it.

The Elm, by reason of its aspiring and tapering Growth (unless it be topped to enlarge the Branches and to make them spread low) are the least offensive to Corn, Pasture, or Hedges of any Tree, to which, and the Cattel, they afford a benign Shade, Defence, and agreeable Ornament.

When you would fell them, let it be about *November*, *December*, or *January*, after the Frost hath well nipp'd them, and that the Sap is fall'n into the Root, which will cause all sort of Timber to be more durable and lasting; and if you find them any way unthriving, fell them, and rather trust to their Successors; for the least decay in any part of them will quickly spoil the whole Tree. In which particular they out-do most other Trees, because where they are once planted, you need not plant any young ones, for if an old one be cut down, you'll have young ones enough from their Roots that will thrive better than any you can transplant.

But if you have occasion to use them for Firing, rather shred up the Boughs than lop them; the best time for the doing of which is in *February*, and by that means you may cause them to spire up, always taking Care to preserve the top, because it protects the Body of the Tree from the Wet which commonly invades that part first, and because of its sponginess the Rain easily penetrates, and will in a short time perish them to the Heart, by which means they will not only yield more Firing than if lopped, but

Timber



Timber too, especially if you take Care to fhred them up once in ten Years, and that you cut the Boughs close to the Body, or else the remaining Stubs will immediately grow hollow, and serve as so many Conduits or Pipes to hold and convey the Rain to the Body of the Tree; but if you lop any let it be the Witch-elm, which is much the hardest and toughest Wood, and bears the best top; or you may form them into Hedge-rows by plashing of them, and thickning of them to the highest Twig, which will afford a magnificent Fence, and be a good shelter against the Winds and the Sun.

Elm is a Timber of extraordinary use, especially *Use.* in Extreame, where it may be continually Wet or Dry, and therefore proper for Water-works, Mills, Soles of Wheels, Pipes, Aqueducts, Ship-keels and Planks beneath the Water-line; and also the Witch-elm, especially if knotty, is good for Wheel-naves, because of their being the toughest Timber, and the strait smooth Elms for Axle-trees, Kerbs for Coppers, Boards, Chopping-blocks, Trunks, Coffins, Dressers, and for Carvers-work, Shovel-boards of a great length and fine colour; and the Roots of the knotty, curled sort are near as good as Walnut for Cabinets, and are often sold for it, which they colour by laying in a wet Saw-pit that hath Oak Saw-dust in it, where they let it soak for a Month, which gives the Grain of it a black Colour like that of the Walnut-tree; and if Elm Timber, as soon as it is sawn, be put into Water and lie three Weeks, and after the taking of it out be kept dry, it will prevent the Worms eating of it, and cause it to last as long as Oak, nay, some Elm-trees found buried in Boggs have turned like the most polished and hardest Ebony, as Mr. *Evelyn* saith, and were only discernable by the Grain. They make likewise very good Espaliers, if made to comply well with the Frames, and kept constantly clipped. Besides which several uses, it makes the second sort of Charcoal, and the



very Leaves of it are not to be despised, for being gathered Green, and suffered to dry in the Sun upon the Branches, and the Spray stripped off in *August*, will prove a great Relief to Cattle in Winter, or scorching Summers when Hay and Fodder is dear, which they will eat before Oats, and thrive exceedingly with it, but then you ought to lay the Boughs in some dry Places to prevent their musting: In some parts of *Herefordshire* they gather them in Sacks for their Swine, and other Cattel; but some say they are ill for Bees, in that they surfeit of the blooming Seeds, which makes them obnoxious to the lark, and that therefore they do not thrive in Elm Countries.

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### Chap. VII. *Of the Ash.*

**O**F *Ashes* some reckon that there are two kinds, the Male and the Female, and that the Male affects the higher Grounds, and the Female the lower, which they esteem the whiter Wood and the taller of Growth; tho' I could never perceive any greater difference in them than what the Soil occasioned; which tho' it make not much difference as to the form of the Tree, yet there is a great deal as to the Timber, as in that of the Oak, some being much tougher than others, the toughest growing on the stiffest Land; but the best to cleave is that which grows on Gravel, Sand, or other light Lands.

*How raised.* The Ash is best raised of the Keys gathered when they begin to fall, which is about the latter end of *October*, and during the ensuing Month, which you must gather to lay by and dry, and then sow them any time between that and the last of *January*; those that are gathered from a young thriving Tree, which produces the fairest Seed, are reckoned the best; they should be sowed but shallow, an Inch or an Inch and an half being deep enough; or you may sow them upon the top of the Ground, and they will come up; but 'tis best not to sow them in frosty Weather, they



they will lie 'till the next Spring after before they appear, except you have a mind not to wait so long for their Springing, in which case you may prepare them for spearing by laying the Keys in Earth or Sand (which is the best) just as you gather them, laying one Layer of Sand, and another Layer of Keys, and then laying another Layer of Sand, continuing so to do 'till all your Quantity is disposed of, observing to keep your Sand moist, and in a covered airy place, and the next *January* come twelve Month after you may sow them, and they will come up the next Spring, but do not let them lie too long uncovered when you take them out of the Sand lest they should spear, and the Air dry and spoil the Shoot. But if you would make a Wood of them at once, dig or plow up a parcel of Land, and prepare it as for Corn; only if you plow it give it a Summer's fallowing to kill and rot the Turf, plowing it as deep as you can, and with your Corn, especially Oats, sow your Ash-keys, and at Harvest taking off your Crop of Corn the next Spring you will find it covered with young Ashes, which by reason of their small growth the first Year should be kept well weeded and well secured from Cattle, who are very desirous of cropping of them; the second Year they will strike Root, and quickly surmount what Impediments they meet with.

The best time to remove Ashes is in *October* and *November*; they are best transplanted young because of <sup>removal.</sup> their deep Rooting, which makes them hard to take up when they grow big; but if you would transplant them large, raise them first in your Seminary, and then remove them into your Nursery, and from thence into the Places where you design to plant them out, which will be a great Advantage, in that it will enable you to take them up with good Roots, as I said before of the Oak; but as 'tis a Tree that hath a large Pith, you must avoid heading of them if you can, and content your self only with cutting off the side Boughs, which will be better for the Timber, and



be likewise sparing of the Roots, except the downright Tap-root, which you may abate as you see convenient. Some cut the young Ashes off about an Inch above the Ground, which causes them to make very large straight Shoots, which they call Ground-ash; and 'tis a very good way where you design them for Under-wood.

Young Ashes are sometimes in Winter-Frost burnt, which makes them look as black as a Coal; you may in such Cases make use of the Knife, yet they commonly recover of themselves, though it is but slowly.

'Tis no way convenient to plant Ash in plow'd Lands, especially where the Soil is flete, because the Roots are apt to run upon the top of the Ground, which makes them troublesome to the Coulter, and the dropping of the Leaves is esteemed hurtful for the Corn, and at *Michaelmas* time makes the Butter bitter when eaten by the Cattle: But in Hedge-rows and Plumps they will thrive very well, where they may be set at ten or twenty Foot distance. In planting of a Wood of several kinds of Trees for Timber, every third set, at least, should be an Ash, it being a Timber that is saleable at any size.

*Soil.*

Ash delights most in a light dry Mould, the richer and fatter 'tis the better, yet it will grow on any sort of Land if it be not too stiff, wet, or boggy, though on Banks or Rising-grounds, near Rivers and running Streams they will thrive exceedingly, or in wet Lands that are well drained.

*Use.*

The Ground-ash (like the Oak) much excels a Bough or Branch of the same Bulk for strength and toughness, and is a good lasting Timber where 'tis kept dry, and the Ends of it not laid in Mortar, but Clay or Loam. 'Tis remarkable, that the Ash, like the Cork-tree, grows when the Bark is as it were quite peeled off, as hath been observed in several Forests and Parks. Some Ash is very finely veined and much prized by the Cabinet-maker, which they often call by the Name of green Ebony, and bring it to its lustre



lustre with *China* Varnish. But they often vein it by Art, especially for Gun stocks and such uses, by steeping of filings of Iron in *Aqua Fortis*, with which they draw Veins or improve those that are natural, by tinging of them with this Liquor, which will sink into the very Grain of the Wood, and give a black Colour where-ever you touch the Wood with it.

The use of Ash (next to Oak itself) is one of the most universal sorts of Timber we have, it serves the Soldier, Seamen, Carpenter, Wheel-wright, Cooper, Turner, Thatcher, and Husband-man for Ploughs, Carts, Axle-trees, Harrows, Bulls, Oars, Blocks for Pullies, Sheffs; and like the Elm, is good for Mortasses and Tenons, and likewise for Pallisade-Hedges, Hop Garden-Poles, Pikes, Spars, Handles, Stocks for Tools, Spades, Guns, &c. So that in Peace and War 'tis a Wood of the greatest Usefulness; the white and rotten part of it composes a Ground for sweet Powder, and formerly the inner Bark was made use of to write on before Paper was invented; and the Truncheons make the third sort of the most durable Coal, and is of all other the sweetest of our Forest-fuel, and will burn even while it is green. But the shade of the Ash is not to be endured, because it produces a noxious Insect; and because of the late Budding, and early falling of the Leaves, and therefore 'tis not to be planted for Walks or Ornaments, especially near Gardens, because of their spreading Roots and falling Leaves, both which are prejudicial to them.

The Season for felling of this Tree is when the Sap is at rest, from *November* to *February*; but in lopping of Pollards, it being a soft Wood, it ought not to be done till Spring, that the Bark may quickly come on to cover the Wound; nor should the Boughs, for the same Reason, grow too big, because they will be so much the longer before they heal, and so give opportunity to the Rain to soak into the Tree, which will quickly cause it to decay, so that  
you



you must be forced to cut it down, or else both Body and Lop will quickly be but of little Value; and the same thing ought to be done when you see the Woodpeckers making holes in them, or the top Boughs begin to wither or be unthrifty, which is a sure Indication of their decay. The Keys of the Ash are a good Pickle while young and tender; and when near ripe, being gathered about the beginning of *August*, they are good to preserve Beer or Ale, I having drank small Beer in Summer-time brewed with them without any Hops in it, that drank well at two Months old; but if some Hops be mixed with them they will do the better.

### Chap. VIII. *Of the Beech.*

THE *Beech* is of two sorts, and numbred amongst the Glandiferous Trees; the *Mountain-Beech*, which is the whitest and most sought after by the Turner, and the *Campestral* or *Wild-Beech*, which is of a blacker Colour and more durable.

*How raised.* Both which sorts are raised from the Seeds, and are to be managed like the Oak, which is the best way of raising of a Wood, unless you will make a Nursery of them, and manage them as is directed for the Management of Ashes. Sow them in *Autumn* or later, or rather nearer the Spring to preserve them from Vermin, which are great devourers of them. They may likewise be planted of young Seedlings drawn out of such places as the Seed falling from the Trees doth propagate.

*How removed.*

In transplanting of them, cut off only the Boughs and bruised Parts two Inches from the Stem, within a Yard of the top; but be very sparing of the Roots, that is, for such Trees as are of Stature. They make spreading Trees and a fine Shade.

*Soil.*

They will grow on Gravel, Sandy, or Heathy Ground, either upon the Declivities, Sides or Tops of high Hills, and on Chalk or Rocks, where they will

strangely



strangely insinuate their Roots into the driest and hardest Parts, and in Vallies where they grow in Confort they rise to a vast Height though the Soil be never so Stony or Barren, if it be but natural to them; but they are very peculiar to what places they affect.

The *Beech* serves for various uses of the House-wife, *Uses.* as for Dishes, Trays, Rims of Buckets, Trenchers, Dresser-boards, Screws, Chairs, Stools, Bedsteads, Shovel and Spade-grafts, Floats for Fishing-nets made of the Bark; it is good also for Fuel, Bavin, Felloes of the *London* Carts, and Coal, though of the least lasting, not to omit the Shavings of it for the fining of Wine, and the Ashes of it with proper mixtures, is good to make Glafs. If the Timber lie altogether under Water it is little inferior to Elm. Of the thin *Lamina* or Scale of the Wood they make Scabbards for Swords, Band-boxes, Hat-cases, and formerly Covers for Books, &c. Bees delight to hive in the Cavities of these Trees: It is much subject to the Worm, and therefore it will do well, so soon as the Timber is cut, to lay it in Water for a fortnight or three Weeks, as is before directed about the Elm. The Beech being pruned heals the Scar immediately, and is not apt to put forth Side-boughs again. The Mast is excellent for the fatting of Swine and Deer, to which Hogs may be drove about the latter end of *August*. Some Families have by the Seed been supported with Bread in some parts of *France*, they grinding of them for that use, and they afford a sweet Oyl. The Leaves gathered somewhat before they are too much Frost-bitten make excellent Matresses to lay under Quilts instead of Straw, because they continue sweet seven or eight Years without being musty or hard, as Straw will be; and they are much used both in *Dauphine* and *Switzerland* for that use.



## Chap. IX. Of the Chestnut.

OF Chestnut Trees, *Pliny* reckons several kinds, especially about *Tarentum* and *Naples*, but we have but one sort common in *England* that I can hear of. We have Nuts from several parts, the largest and fairest from *Portugal* and *Bayonne*, our own being very small and not so sweet as the former, but the way to have fair Fruit is to graft them.

*How raised.* They may be raised by Layers, but the best way to produce them is by the Nut; for which use choose the largest brown and most ponderous for Fruit, and the lesser ones for Timber. The best way of planting them is like Beans, previous to which, let the Nut be first spread on a Floor to sweat, and then cover them with Sand, and after a Month's time take them out and plunge them in Water, and the swimmers reject. Dry them again for thirty Days more, and then Sand them as before; after which try them again in Water, and repeat the same Course with them 'till Spring; at which time, or in *November*, you may set them; but if you set them in Winter or Autumn, it is best for to set them with the Husk on, which is a good Preservative against the Mice; it is also necessary to keep Hogs from them, who will find them if possible, and as they are liable to be spoiled by the Frost as well as by Vermin, I think the latter end of *February* the best time to set them in.

Some sow them confusedly in Furrows like Acorns, and govern them like the Oak, but then the Ground ought to be well plowed, and fallowed the Summer before, and when they spring, be cleansed at two Foot distance after two Years growth; likewise Coppices of Chestnuts may be wonderfully thickned and increased by laying the tender Branches. Such as spring from the Nut are best, and will thrive exceedingly if the Ground is stirred and loosened about the Roots for two or three of the first Years of their growth,



growth, and the superfluous Wood pruned away, which you may esteem most of the side Branches to be: They also shoot into fine Poles from a felled Stem, useful for many purposes.

Being come up they thrive best unremoved, there being hardly any Tree that bears Transplantation worse, in that they will sometimes upon removal make a stand of four or five Years; and therefore when you design to transplant them, I shall not propose the raising of them in a Seminary, and to give them several Removes, as I directed about other Trees, but to raise them at first in your Nursery, where you design to let them stand till you can plant them out into your Grounds; for they do not much run down with Tap-roots, but they may be taken up at any time with good Roots, without that transplanting of them that is upon that Account necessary for the removal of other Trees; and in the removal of them I am rather for cutting only of the Side-boughs, than heading of them. The best time for removing of them is in *November* and *February*; they may be planted at twenty or thirty Foot distance for Timber, and for bearing Fruit at forty, but for other uses a great deal nearer.

I may here bring in the Horse-chefsnut, which being easily increased by Layers grows into a goodly Standard, bearing a fine Flower, and is now all the Mode for Walks and Avenues in *France*, being at first brought from *Constantinople* to *Vienna*, and from thence to *France*, though directly from the *Levant* to our Climate, where it grows very speedily to a large Stature, especially if planted in a rich Soil near Water. They will bear Nuts here, which are ripe about the latter end of *August*, of which they may be raised or by Layers.

The Chefsnut likes best a light hazel brick Earth, or black Mould, or moist Gravel, and will grow well on Clays, Sand, or any mixed Soil, especially if raised from the Nut without Transplantation, and upon



on exposed bleak Places, and the pendent Declivities of Hills to the *North*, in dry airy Places, and sometimes near Marshes and Waters, where the Water doth not touch the Roots, which when it doth, is very prejudicial both to the Timber and Fruit; but they affect no other Compost, save what their own Leaves afford them, the dropping of which makes them injurious to what grows under them. They bear Cold better than Heat.

*Use.*

Next unto the Oak, the Chesnut is the most sought after by the Carpenter and Joyner for Building; and before the use of *Firr*, was much made use of, many of the ancient Houses in *London* having been built of it. It affords the best Stakes and Poles for Pallisadoes and Hops, good Props for Vines, and makes extraordinary Hoops; for which use only they keep several Coppices in *Kent* all of Chesnut, near the Water-side, of which they make great advantage by sending of them to *London*. The Timber is likewise good for Mill and Water-works; and the Trees are very good shelter, being set on the North side of other Plantations, and for Walks and Avenues. The Timber doth also well for Columns, Tables, Chests, Chairs, Stools, Bedsteads, Tubs, and Wine-casks, which it preserves with the least Tincture of any Wood whatsoever: Some say, that if the Timber be dipp'd in scalding Oyl, and well pitch'd, that it will become very durable: It is very apt to decay within when it shews fair to the Eye. The Coals are excellent for the Smith, being soon kindled and soon extinct, but the Ashes are not good for Lee, because they are apt to stain Linen.

As for the Fruit, it is better beat down from the Trees some little time before they fall of themselves, because they will keep the better, or else you must smoak-dry them, but not if you design to plant them. And though here in *England* they are Food for Swine, yet in other Countries they are much esteemed, and would certainly be more useful and nourishing to our

Country.



Countrymen than many of the Herbs and Roots that they eat. In *Italy* they boil them with Bacon; and they are certainly to be preferred before our Cole or Beans, for they afford a good robust Diet, and are very nourishing, being much commended by *Galen* above all other sorts of Nuts; they also boil them in Wine, and roast them on Embers, and some grind them to Meal, and make Bread and Fritters of them, and the *French* Cooks use them in stew'd Meats, Beattil, Pies, &c. the best way to preserve them for use, is to keep them in earthen Vessels in cool places, but some keep them in a Smoak-loft, others in dry Barley-straw, and others in Sand, &c.

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Chap. X. *Of the Walnut.*

**T**HE *Wallnuts* are of several sorts, as the large soft Shell; and the small hard Shell; the Wood likewise differs, some of which is of a whiter, and some of a blacker Grain than the other; the black Grain'd bears the smallest, hardest Nut, and the Timber is much to be preferred, the best sort of which are those that grow in *Virginia*, which bear a kind of a square Nut, from whence we might easily procure them. Next unto these are those of *Grenoble*, which are much prized by the Cabinet-makers.

The best way of raising *Wallnuts* is of the Nut, How rais. which you may set like Beans: Gather the Nuts from a young thriving Tree, bearing a full plump Kernel, which is best to be beaten off the Tree (as was prescribed of the *Chestnut*) some Days before they fall from the Branches of themselves, and kept in their Husk, or without, 'till Spring; or by Bedding of them (being dry) in Sand or good Earth. You may set them about the latter end of *February*, or beginning of *March*, or earlier; but if you can, set them with the Husk on, because the Bitterness of it is a good Preservative against the Worms, and if you chop some Furz and strew about them under Ground, it will



will be a good Defence for them against the Rats and Mice.

*How trans-  
planted.*

It is a Tree that bears Transplantation but ill, and therefore doth much better to stand where it is raised of the Nut; but if you have occasion for the removal of them, let not your Trees be above four Years old when you remove them; and if they be once before removed from your Seminary to your Nursery it may do well; which first Transplantation may be performed at two Years old; but some say, the best time to transplant them is at one Year old, and to take up the Earth and all with them, that you may not cut the Roots, which should be spared as much as you can: And observe as near as you can, to remove them to the same sort of Land that they were raised on, for it is very difficult to make them either grow or prosper on a different Soil, but in the removal of them by no means cut the Head, only shred up the side Branches, because of the hollow Pith which is apt to let in the Water, and be as sparing of the Roots; anything of Bruises is very prejudicial to them. You may likewise, as I proposed for the *Oak*, put a Tile-shred under them to occasion the spreading of the Tap-roots, and they may be grafted or budded, which will improve the largeness of their Fruit. The time to remove them is in *November* and *February*, and the best Compost for them is Ashes. They should be planted at forty Foot distance at the least, because they love to spread both their Roots and Branches, though they will grow amongst other Wood provided you shred up the side Boughs.

The *Walnut* delights most in a dry sound rich Mould, especially if they have Chalk or Marle underneath them, and will grow well on any Land that is dry, where they are raised from the Nut, and where they are protected from the Cold (tho' they affect Cold rather than extream Heat) and grow in Pits, Vallies, High-way-sides; also in Lime-stone Ground,

if



if Loomy, and on Hills that are Chalky; and they are so far from prejudicing of Land, that in *France* they plant them in their Corn-fields, esteeming of them a help to their Corn in preserving of it from the Cold; nor are the Roots any hindrance to the Plough, it being a Tree that will root deep enough where they have a Soil that will allow of it.

The *Walnut-Tree* is the most beneficial Tree that *Use* can be planted, not only for the value of the Timber, but the constant Profit they bring by their Fruit; and if the Timber were more plentiful, we shou'd have far better Utensils of all sorts for our Houses, as Chairs, Stools, Bed-steads, Tables, Wainscot, Cabinets, &c. than what is commonly made of *Beech*, and not so subject to the Worm. They make fine Avenues, and do excellently near Hedge-rows, of which I am sorry Foreign Parts, almost every where, give more ample Examples than our own Country, tho' many Gentlemen, of late, are much to be commended for the Improvements they have made this way. Of what Universal use this Timber is to the *French* may be seen in every Room both of Rich and Poor. It is of particular esteem with the Joyner for the best colour'd and grain Wainscot, with the Gun-smiths for Stocks, and excellent for the Bodies and Wheels of Coaches. In *New England* they make Hoops and Bows with it, and the Drum-maker uses it for Rims; the Cabinet-maker for Inlaying, especially the part about the Roots when it is curled and knotty, which sells often at very great Prizes; but to render it the better colour'd, the Joyner puts the Boards into Ovens after the Batch is drawn, or lays them in a warm Stable; and when they work them they polish them over with its own Oil very hot, which makes it look black and slick; but as it is subject to shrink, it ought to be well season'd before it is work'd. It is not good to use for Beams or Joysts, because of the brittleness of it: And besides the uses of the Wood, the Fruit with the Husk, when tender and very young, makes



a very good Preserve, and also is us'd to pickle like Mangoes, and when ripe they are very good Food, afford a very useful Oil for *Painters*, and for Gold Size and Varnish to polish Walking-staves and other Works with, which is wrought in with burning. One Bushel of Nuts will yield about seven Pounds of Oil, which in *France* is much used to burn in Lamps instead of Candles; from whence, in time of Peace, we are supplied with great Quantities, when it might with much more advantage be made a home Commodity. The young Timber is held to make the better colour'd Work, but the older being more firm and close is the best for Cabinets. That the Husk may open, lay them up in a dry Room, turning of them with a Broom, but without washing, for fear of Mouldiness, and those that come not out easily of their Husk should be laid to mellow in the Heaps, and the rest in the Sun till the Shells dry, else they will be apt to destroy the Kernel; but the best way to keep them is to bury them in the Ground in a leaden or earthen Pot close cover'd, that the Vermin may not come at them, and they will keep plump all the Year: They are very good for Hogs, but too chargeable a Provision for them with us. The very Husk and Leaves being macerated in warm Water, and the Liquor pour'd on Walks or Bowling-greens, will kill the Worms without hurting the Grass; and the green Husks boiled makes a good Colour to dye a dark Yellow without any mixture; and if they, or the first peeping red Buds and Leaves be reduced to Powder, it will serve instead of Pepper to season Meat, or for Sawce, and the Kernel being rubbed upon the Cracks and Chinks of a leaky Vessel, stops it better than any Pitch, Wax or Clay. After the Nuts are beaten down, the Leaves should be swept into heaps and carried away, because their Bitterness impairs the Ground, and injures the Trees.



Chap. XI. *Of the Mulberry Tree.*

**T**HE *Mulberry Tree* is of two Sorts, that which bears the black *Mulberry*, which I mention first, as most known amongst us, and that which bears the white Berry, having a smother Leaf, and is much to be preferred for its usefulness for Silk-worms, in that it buds near a Fortnight sooner than the black, and the Leaves are finer and tenderer for them when young, which are two very great Advantages to them, being much planted in the Silk Countries, and would certainly turn to very great Advantage here, if made use of to the same purpose, it being a Tree that will thrive well in our Climate, and may be had of most of the Gard'ners near *London*.

Mr. *Evelyn* says, they raise them in the Countries *How raised.* where they cultivate them for Silk-worms by separating of the Seeds from the Berries, which he says they do, when gather'd thorough ripe, by bruising of them in their Hands, and washing of them in several Waters, and the Seed, which is very small, will sink to the bottom while the Pulp swims on the top; which must be carefully taken off, and the Seeds taken out and laid on Linen cloth, and dried, for which an Hour is sufficient; but the sowing of the ripe *Mulberries* he prefers, which should be a little bruised or squashed, and sowed in rich black Garden Mould, and ought to be well moistned at first sowing, tho' rarely watered afterwards till they peep; they must be kept warm by being thinly covered with Straw to protect them from the Heat and the Birds. The season of sowing them is in *April* or *May*, tho' some forbear 'till *July* or *August*; and some sow them in *September*, which I think the best time; at the first keep them moderately shelter'd and clean weeded, and at two Years growth, about *October* or *February* you may draw them up gently, and dipping of the Roots in Water, transplant them into a warm place in your Nursery, cutting of them within three Inches of the Ground, and



giving them three dressings or half diggings to kill the Weeds in *April, June and August*. The second Year purge them of superfluous Branches, reserving the Principal Stem; of which, if the Frost injure any part, cut it off. This way of raising of them may do well in hot Countries, but I should rather chuse to raise them of Layers, from another Plant or Suckers at the Roots of other Trees, which will take very readily: The best time of doing of which is in *February*, leaving not above two Buds out of the Ground, which you must carefully water and they will be well rooted in two Years. Dr. Beal says, they may be grafted in the *Black Mulberry* in Spring, or inoculated in *July*. The Scions are best to be taken off of an old Tree that bears broad even Leaves, which being the most useful part of a Tree, is chiefly to be consider'd.

*How trans-  
planted.*

It is a Tree something difficult to transplant, except it be planted in a rich Soil and while young, and be kept well watered; do not cut off the Head in removing of them, but trim up the side Branches, so as to leave but a small Head on them. The best time to transplant the *White Mulberry* is in *February*, it being a more tender Tree than the *Black*.

*Soil.*

They affect a light dry rich Mould, which if it is well manur'd with Ashes or Horse-dung will be the better. And if they are exposed to the Sun and Air, they will thrive much the more for it.

The best time to transplant them is at about five Years growth in *September and October*, in which Work spare cutting of the Roots as much as you can, and take great care to save them in taking them up; and if you find any of the Branches dry or hurt with the Frost, cut them off, and where the Branches grow too thick, a little thinning of them for the first Year or two after they are transplanted may do well, and likewise digging and stirring of the Earth about their Roots greatly improves them.

Of the two sorts of *Mulberries* the *White* is much the finest, being called so, because the Fruit is of a paler Colour,



Colour, more luscious and lesser than the *Black*; the Rind likewise is whiter, and the Leaves of a mealy clear green Colour. It is a beautiful Tree for Walks and Avenues, and gives a fine Ornament to the Silk Country, where they plant them, in Walks or regular Groves about their Fields.

The Timber will last as long in Water as the most *use*. solid *Oak*, and the Bark makes good Bast Ropes; it will suffer no Caterpillar or Vermin to breed on it, either as it grows or when cut down, except the Silk-worm only. The chief Value of the Tree is the Leaf for the Silk-worm, for which use they are let for great Sums, single Trees yielding to the Proprietors sometimes twenty Shillings *per Annum*, and to the Owners of the Worms six or seven Pounds of Silk, which commonly sells for as many Pounds in five or six Weeks time; besides which, the Leaves are good for Cows, Sheep and other Cattle, especially young Hogs, being boiled with a little Bran, and the Fruit is very good for Poultry.

The Leaves best for Silk-worms are those gathered from Trees of about seven or eight Years growth, for the gathering of them from young Trees is apt to burst the Worms; so doth likewise the Leaves of Trees planted in too waterish a Soil, and those that are sick and yellow. The Leaves should be clipped off and let fall upon a Sheet or Blanket, and not gathered by Hand, tho' that is better than to flip them off, which galls the Branches, and bruises the Leaves. Gather them as dry as you can, but if you are necessitated to gather them in wet Weather, put the Leaves in a pair of Sheets well dried by the Fire, and shake them up and down till the moisture be drank up in the Linen, and then spread them on another dry Cloth. The top Leaves and the oldest should be gathered last, as being most proper to feed the Worms towards their Spinning time.



Chap. XII. *Of the Servise Tree.*

**T**HE *Servise Tree*, Mr. Evelyn says, is of four kinds, but there is little difference of those which we have in *England*, except only that some of them bear a much larger Berry than the others.

*How raised.* They may be raised either by Layers or of the Berries, which being ripe, that is, rotten, you may eat or rub off the Pulp, and sow the Seeds in your Seminary, which is best to be done as soon as you separate them from the Pulp; or if you have a mind to keep them longer, you may keep them in dry Sand 'till after *Christmas*, and from the Seminary remove them to your Nursery, and from thence transplant them as you have occasion; but because they may often be met with in Woods, it being a Tree that admits well of Transplantation, most furnish themselves with them that way. They may likewise be either grafted or budded upon their own kind to a great Improvement of their Fruit.

*Soil.* They delight in rich Clay or the Hazel-brick Earth, where it is rather moist than dry. In dry Grounds they never bear well, tho' they will grow almost on any Soil when they are raised of the Seeds.

*How transplanted.* They may be transplanted of any bigness, it being a Tree that bears Transplantation well: If you head them the Wound will quickly heal up.

*Use.* The Timber is useful for the Joyner, Engraver of wooden Cuts, Bows, Pullies, Screws, Mills, Spindles, Pistols and Gun-stocks, being of a very fine Grain, and is very lasting, being rubbed over with Linseed Oil well boiled, and may be made to counterfeit *Ebony* and most of the *Indian Woods*; also it is used to build with; yielding Beams of a considerable Substance, and the Shade is beautiful for Walks; they give an early presage of the Spring, and peep out in the severest Winters.



Chap. XIII. *Of the Maple.*

**T**HE *Maple* Mr. *Evelyn* reckons of several kinds; he commends most the *German Aier* and the *Maple* of *Virginia*; as for the sorts we have in *England* I can find no great difference in them; those that we keep shred up to run to Standards, have a fine clear Grain, and those that are pollarded grow the most knotty and full of Burs, it being a Tree very subject to put out side Branches, which fills it with Knots; but it is prejudicial to let it grow tall where there is any Wood or Trees under it, because of a clammy Dew that sticks to the Leaves, which when wash'd off by the Rain, glews up the Buds of what Trees or Bushes grow underneath, and so kills them; and therefore they are not fit to grow in Hedges or amongst Wood.

It is produced, and doth produce it self by the Seed, *How raised.* Layers, and from the Roots of old Trees, like the Elm, and by Suckers, which occasions their being so plentiful. The Seeds will lie, like the *Ash*, till the next Year after they are sowed before they come up, and therefore they may be ordered the same way.

They may be transplanted almost of any size, and *How trans-* may easily be removed, in that they do not run down *planted.* with Tap-roots so much as many other Trees do; the best time to remove them is in *October* or *February*.

They affect most a sound dry Mould, especially Banks, in which their Roots delight to run, and desire rather to grow on Hills than Bottoms, tho' they hardly refuse any sort of Soil.

The Timber is very useful for the Turner for Dishes, *Use.* Cups, Trays, Trenches, &c. and when it is clean and without Knots it makes excellent Board, and for its lightness is often employed by the Musical Instrument-maker under the Name of *Aier*; but that which is fullest of Knots and Burs is of greatest Value, being much prized by the Cabinet-maker.



Chap. XIV. *Of the Sycamore.*

**T**HE *Sycamore*, Mr. *Evelyn* says, is our *Acer majus*, one of the kinds of *Maples*; he prefers the *German Sycamore* much before ours; it's a quick grower, and where an old Tree is near any dug up Ground, it will readily furnish you with Plants enough to set in what places you please.

*How raised.* It is raised of the Keys as soon as ripe, which come up the first Spring, and being provided with a large Leaf, the Weeds will not soon choak them; also young ones may be got of Suckers from the Roots and by Layers; they are manag'd like other Nursery Trees, and may, when they are big enough, be planted out for Walks or other occasions.

*How transplanted.* They may be transplanted of any size, which they bear very well; and you may in transplanting of them, either head them, or only trim up the side Boughs, which way is to be preferr'd where they do not grow too small and tall.

*Soil.* They thrive most in a dry light Soil, in which they will thrive very much, tho' they will grow almost on any sort of Land, and may be planted where other sorts of better Trees will not prosper so well, but they are not esteem'd so good for Walks or near fine Gardens, because of the falling Leaf which is apt to foul them; and it is a Tree whose Leaves hang upon them the shortest time of any Tree, which makes them neither good nor ornamental for Walks; besides which, there is a Honey-dew which hangs upon their Leaves, and breeds Insects; but both their Dew and Flowers are very advantageous for Bees; Mr. *Cook* commends them much for Parks and Underwood, because the Deer are not apt to spoil them, and in that they make large Shoots from old Stubs.

*Use.* This Wood is of excellent Use for the Turner for Trenchers, Dishes, &c. and also for Cart and Plough Timber, being light and tough; and not much inferior to Ash it self.

The



The Sap is also esteemed by some as good as that of the Birch, and as wholesome. It will run both Winter and Summer, so as in a short time to yield a good quantity of Sap. One bushel of Malt, with this Liquor, will make as strong Ale as four Bushels, with common Water.

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Chap. XV. *Of the Horn Beam.*

**T**HE *Horn Beam* is but of one kind, and is much more valued in Foreign Parts than amongst us, for its shade and the delicate verdure of its Leaves, being the finest and the pleasantest green of any whatever, and a Tree whose Leaves hang the longest upon it, it being one of the forwardest in budding, and one of the last that falls, the old Leaves seldom dropping till the young ones shove them off.

They may be raised of Seeds, which are ripe in *August*, and should be sown in *October*. They will lie in the Ground till the next Spring come twelve Months after, and when they peep, should be carefully shaded and weeded: But the best way of raising them is by Layers from another Plant, or by Sets which may be easily procured in Woods, and other places where they grow, they being apt to run up with Suckers from the Roots.

They delight most to grow on cold Hills, in stiff Clays, and in barren moist places in the Woods, there being few Soils that they refuse, except it be those that are very dry and burning; it being a Tree that grows best in the shade, and under the dropping of other Trees.

The common way of transplanting of them is like Quick, when they are about the bigness of your Finger, and to cut them off about two or three Inches above the Ground; but they may be planted, when they are about ten or twelve Years growth, for Standards like other Trees.



Use.

The Timber is useful for Mill-coggs, and other things of that kind (for which purpose it excels all others) and for Yoak Timber Heads of Beetles, Handles for Tools, Stocks, Lafts, and for the Turner's use. It's very tough and white, and is good Firewood, for which use it is often cut. When the Boughs are too large, they commonly decay its Body, occasioning in it often rottenness and hollowness. It is the quickest grower of any of the hard Woods, and preserves it self the best from the nipping of Deer; and upon that account more common in Forests and Parks than other sort of Wood, where the Soil is natural for it. It bears clipping the best of any Wood, and makes the thickest Hedges and covered Walks. It grows thickest and fullest of Boughs at the bottom, even to resemble the thickness of Walls it self; upon which account most of the fine Grottos in *Italy*, and the Walks and shady Places of *Versailles*, are of this sort of Wood, which they keep about fifteen or twenty Foot high, cutting them with a Scythe fastned to a streight Handle, which dispatches that Work much sooner and easier than the Shears.

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### Chap. XVI. *Of the Lime Tree.*

THE *Lime-Tree* or *Linden*, Mr. *Evelyn* reckons to be of two sorts, viz. The broad leaved Lime which comes from *Flanders*, being a very quick growing Tree, and bears a very fine broad Leaf, only it is apt to shed too soon; and the wild kind, which, he says, grows naturally in many places of *England*, bearing a smaller Leaf than the other; by which, I suppose, he means the Tree which they call the *Pry-tree*, which grows the most plentifully in *Essex* of any part of *England* that I have seen; the Timber of which may be as good, if not better, than that of the right Lime, and the Bark is much us'd there to make Baste-ropes, which are much cheaper than Hemp Ropes are reckoned, and not to rot so soon; but for



for the propagating of it for Walks and such uses, I can no way commend it; first because of its being of much flower growth than the *Flanders Lime*; and secondly, because it's a Wood of that ill savour, that if you break a piece of it, you cannot well hold it to your Nose: It yields an ugly stench in burning, which I mention, because it is a good way of distinguishing the true Lime from it, that hath none of that scent.

They may both be rais'd by Seed, which doth not every Year ripen with us; but when they are ripe, *How raised.* you may know it by their being plump and full under the Husk, and the Body white when bit or cut in two; whereas if the Year be not kind for them, the Husk will be full of nothing but a chaffy substance, or have some small lank Seeds in them. The Seeds are ripe in *October*, which gather in a dry Day, and after you have laid them to dry about a Week in an open Room, put them into a Bed of Sand indifferent moist, and so keep them till about the middle of *February*, sowing of them under some Wall or other shelter, that may preserve them from the North and North-west Winds; and if the Spring and Summer be dry, keep them indifferent moist, and stick some Boughs over them to shade them, keeping of them clean from Weeds; where let them stand two Summers, and then transplant them into your Nursery, ordering of them as is directed for other Trees.

But the common way of raising of them is by Layers from a Mother-plant, or by laying of such Suckers as come from the Root. It being a Tree very apt to put forth Suckers, it's best to lay them betimes, as about *September* or *October*, and the next Year they will be fit to transplant into your Nursery; it being a Tree that strikes Root well, and is very easily rais'd by the same Methods that you are directed for ordering the Elm.

They will grow almost in any Soil, but they delight most in a fresh, rich, Mould, tho' they will grow well on a loamy Ground, that is rather strong than light,



light, or any moist Land: But the first Year of planting, if the Spring is any thing dry, they should be kept well water'd. It is a Tree will grow any where in Cities and Towns amongst the Smoak of Houses, which choaks other Trees, and therefore is a very proper Tree to plant, as the *Dutch* do for Walks in the middle of their Streets, and round the tops of their Walls; so that some of their Cities at a distance, seem rather Walks of Trees, than to be compos'd of Houses.

*How trans-  
planted.*

You may, if you have occasion, transplant them very large, as about the bigness of your Leg, but when they are about two Inches Diameter, and eight or ten Foot high is the best size; but if they never were transplanted before, it is better to remove them while smaller. They bear removing well, especially if once or twice removed in the Nursery before you plant them out into Walks or Hedge-rows.

It is a Tree that loves pruning, and heals the wound the soonest of any, and naturally delights to grow tall; and therefore if in your Nursery they shoot much, leave some side-Boughs to check the Sap, lest by forcing them too much up into the Head, it make the Head too large for the Body to bear it, which many times in high Winds is apt to break off the top; and therefore whenever you plant them for Walks or in Hedge-rows, a discreet thinning of the Boughs is necessary to let the Wind through; for being a large Leaf and a light Wood, the Wind is very apt to damage them. If you plant them for Walks, set them at about twenty or thirty Foot distance.

*Use.*

It is a noble Tree for Walks and Avenues, casting a large shade, and growing of a fine shape for that use, and is of a pleasant green Colour. The Timber is fit for any use that the Willow is good for, and is much to be preferr'd both for its strength and lightness, being of a fine white Colour, and works easily without being subject to split, and is much used by Carvers for the Images they adorn Ships with; for which, if it is large,



large, it sells for as good a price as most other sorts of Timber. It is also employ'd by Architects for Models for designed Building, and for small Statues and Figures, and the Coal is esteem'd for Gunpowder better than that of Alder it self. They make also fine white Boards, and the smoothest side of the Bark makes Tablets to write on, and the Twigs Baskets.

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Chap. XVII. *Of the Quick Beam.*

**T**HE *Quick Beam* or wild Sorb, by some called the *Irish Ash*, is a species of wild Ash, having both a Bark and Leaf much resembling the Ash, only the Leaf is jagged on the Edges, and something smaller and longer in Proportion to its Bigness; and instead of Keys bears red Berries, which are very ornamental to them, and are preceded by Blossoms of an agreeable Scent.

They are best raised of the Berry, which is ripe *How raised.* in *October*, when is the best time to sow them. They must be cover'd but shallow, an Inch deep being deep enough to lay them. Whether they come up the first Year, or lie in the Ground like the Ash 'till the next Spring after, I cannot yet learn.

They delight to grow on Hills, and in Woods, *Soil.* and in any dry Ground, and grow more commonly in the Northern than Southern Parts of *England*, as upon the coldest, bleak, and most exposed of the peak Hills in *Derbyshire*, where they thrive without shelter upon dry stony Land, which makes me think them a very hardy Tree, and worth propagating.

I suppose in Transplanting of them, they may be ordered as the Ash. *How trans-* Whether they will grow to the *planted.* same Stature, I cannot determine, because I never saw any of them but on the barren peak Hills. Mr. *Evelyn* says, they plant them every where in the Church-yards in *Wales*.



*Use.*

It is very tough Wood, and all heart, being good for the Wheel-wright, and all sorts of Husbandmen's Tools. If large, 'twill make good Plank-boards and Timber. Mr. *Evelyn* says, it is commended by our Fletchers for Bows, next unto Yew; that the Berries fermented by themselves, if well preserved, make an excellent Drink against the Spleen and Scurvy; and that Ale or Beer brewed with them makes an incomparable Drink, which he says is much used in *Wales*.

### Chap. XVIII. *Of the Birch.*

**T**HE Birch is a very common Tree, and needs no Description, being to be found almost in all Parts of *England*.

*How raised.*

It increaseth commonly from the Roots and Suckers, though it bears Seeds which it sheds in the Spring; but whether the Seeds will produce them, I have not yet heard of any that have made the Trial.

*Soil.*

It affects most a dry barren Soil, where hardly any thing else will grow, and will thrive on any sort of Land, let it be wet, dry, sandy, gravelly, rocky, or boggy, and the barren heathy Lands that will hardly bear any Grass.

*How transplanted.*

The best way of transplanting of them, is to remove the Suckers that have Roots to them, which cut off about three or four Inches long, and plant as you do Quick, from which will come many Shoots, which you may let grow for Underwood, or reduce them to one Stem, which in a few Years will make it fit for the Turner.

*Use.*

*Birch*, though it is the worst of Timber, yet it is of use for many Occasions, as for Ox-yoaks, Hoops, Screws, Wythes for Faggots, Brooms, &c. and for Dishes, Bowls, Ladles and other Utensils; especially the Roots of which, in *Russia*, they make very fine Bowls and Dishes that are very tough, and not subject to split, covering their Houses with the Bark,

of



of which the *Indians* in the Northern Parts of *America*, as *F. Hennepen* says, make Canoes that are very swift and large; and of several other Parts of the Tree, they make fine Baskets, Boxes, &c. It is good Fuel, and makes very good Charcoal, and some say, that the Bark will tan Leather quicker and better than that of Oak, besides the Wine made of the Sap, which I shall refer to another place.

Chap. XIX. *Of the Hazel.*

**T**HE *Hazel* is of several kinds, and differs both as to the Leaf and Nut, even amongst the wild kind, without reckoning the several sorts of Filberts, and the large *Spanish* Nut, the Fruit of which last is much improved by Transplantation and Grafting.

The *Hazel* is best raised of Nuts, which you may sow like Mast in a pretty deep Furrow; the best time for the doing of which is in *February*, because Vermin are very great devourers of them. They are very much prejudiced by Frost, till which is over they should be kept moist in their own Leaves or in Sand, and not suffered to Mould. They may likewise be raised by Layers and Suckers from their own Roots, which they are apt to put forth in great plenty. *How raised.*

They will grow on any cold, dry, barren Soil, that is either sandy, gravelly, or chalky, and also on Mountains and Rocks, but they thrive best on moist Bottoms, sides of Hills and Banks; and the Filbert loves a rich black Mould. *Soil.*

They are commonly transplanted small, being seldom removed, but to fill up or thicken Woods with, or for Hedges, being cut like Quickset, about six or seven Inches long. *How transplanted.*

The use of the *Hazel* is for Hoops, Poles, Spars, Rake handles, Angle-rods, Fuel-bands, Hurdles; and *Mr. Evelyn* says, that the Chips of it are the best Wood of any to fine Wine with. *Use.*



## Chap. XX. Of the Poplar, Aspen, and Abell.

THESE three sorts of Trees are much of a kind; only the *Poplar* is esteemed of three sorts; the white Poplar which is the most common amongst us; and the water Poplar, the Leaf of which is of a pale green Colour, shaped something like the other, but is not so white underneath; and the black Poplar.

The *Aspen* or Asp-tree hath Leaves much the same with the Poplar, only much smaller, and not so white.

The *Abell* is a kind of white Poplar, only much finer, bears a larger Leaf, makes a much stronger Shoot, and is a much quicker grower; the best sort of which comes from *Holland* and *Flanders*.

*How raised.* They may be raised by Layers or Suckers taken from the Roots, which they are very apt to put forth; especially if any way lopped or cut down, often to the prejudice of the Land they grow in, especially if it is any thing good; so that a small Place inclosed where they grow, will furnish you with Sets enough, though I think those raised by Layers from a Mother-plant make the best Trees.

*Soil.* They will grow on any sort of Land, wet or dry, but thrive best on a rich moist Soil, especially the water Poplar. It is esteemed one of the quickest growing Trees that is, especially the *Abell*, which is one of the best Trees to plant where you desire a speedy Shelter and Walks, they many times making Shoots of eighteen or twenty Foot long in a Year, and any sort of Trees or Shrubs will thrive under their shade.

*Transplantation.* It is a Tree that bears Transplantation well, and may be planted out small like Quick, cutting of them two or three Inches above the Ground, which you must keep clean weeded, and you may prune up the most thriving Shoots for two or three Years. It will make a fair Standard; or you may transplant them when pretty large, cutting off their Heads, which



which they will quickly recover, and set them at ten or twenty Foot distance, but it is a Tree that doth not grow to any very great Age.

The Timber is very good for all sorts of white *use*; wooden Vessels, as Trays, Bowls, and other Turners Ware, Bellows-makers, Ship-pumps, Wooden-heels, Lafts, Carts, Hop-poles, &c. and makes good Timber for Building where it lies dry, and very good Boards, and is serviceable for Fuel; great quantities of it being rais'd in Places where Wood is scarce; for the lopping the Boughs of which the best time is *January*.

The Leaves of Poplar are good for Cattle, which may be stripped from the cut Boughs before they are faggoted, which should be done in the decrease of the Moon in *October*, and reserved in Bundles for Winter fodder.

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Chap. XXI. *Of the Alder.*

**T**HE *Alder* is reckon'd chiefly to be of two kinds; the common sort which only affects moist Ground, and the blacker sort which thrives better on drier Lands.

The Alder is propagated by Truncheons, and, *How raised.* some say, may be rais'd by Seeds; but large Roots or small Suckers, which they put forth very plentifully, are the best to raise them of.

They thrive most in the moistest boggy places *soil*, where nothing else will grow, and are a great Improvement of such Lands, and will grow on the sides of Rivers and Springs.

The best way of removing them, is to transplant *How trans-* the Suckers, which trim up to one Branch; and after *planted.* they have struck Root, you may cut them within three or four Inches of the Ground, which will cause them to spring in Clumps and to increase their Roots and Suckers, or you may transplant the Roots which will spring into Branches; and if you raise them of Trun-



cheons, steep one end of them in Water some time before you plant them, making of holes for them, and not forcing them into the Ground to strip up their Bark; the best time of doing which is in *February*: And as they are to be planted in moist places or near Springs, it will be good to plant them deep, that the Streams may not wash away the Roots, and to preserve them steady from the Violence of the Winds. If you have occasion to cut or prune them, let it be done in *February*, which is the best time for all Aquaticks or soft Woods, because they will be the less time exposed to the wet of the Winter.

*Use.*

It is excellent Timber for Water-works where it may constantly lie covered. It will grow as hard as a Stone. The Coal is good for Gun-powder, and the Wood for Piles, Pumps, Hop-poles, Water-pipes, Troughs of Sluices, Wheels, &c. and is in much request with the Turner. The Bark is much sought after by the Dyer, and some Tanners, and mixed with the Fruit, or macerated in Water with a little rusty Iron, it makes a black Dye, and may be us'd for Ink. Faggots made of it, thrown upon Flints, Brick-bats, and other Rubbish that is laid in Drains, and Earth thrown on them, will last a great many Ages.

Chap. XXII. *Of the Withy, Sallow, Ozier and Willow.*

**E**ACH of which kinds (there being several sorts) I shall not particularize, because they may be all propagated the same way, and delight in the same Soil, especially the Withy, Sallow and Willow.

*How raised.* They may be rais'd of Cuttings stuck in the Ground, or large Truncheons of eight or ten Foot long, where they are in danger of Cattle coming at them, because they will by their height be the better secur'd from them, by putting of Bushes or other Fences about them; only you must observe when they put  
 † their







their constant Crop, the small charge that attends them, and the little pains that is taken to renew any of the old Plants when they decay, which is done by only cutting off a piece of Ozier and sticking of it in the Ground, makes it one of the greatest Improvements that is of moist Lands.

### Chap. XXIII. *Of the Fir, Pine, &c.*

**F**IRS are of several sorts, as the *Norway, Spruce Dram, Scotch*; but the best sort both for Beauty and Timber, is that which they call the Silver-Fir, because the under-side of the Leaf is of a white Colour, and the Leaf is longer than any of the former; except the *Scotch* Fir, which, whether they may not rather be esteem'd a Pine than a Fir is disputable. This Silver-Fir, being, I suppose, the same as Mr. *Evelyn* calls the *Spanish* Fir; it grows to the greatest height of any of the sorts of Firs which we have in *England*, and is of great value for Masts of Ships.

*How raised.* The common way of raising the several sorts of Firs is of Seeds; the best way to get which out of the Cone or Clogs, is to lay them in the Sun, which will quickly occasion them to open; or in Water a little warm, you must take care to gather them before they open, which they commonly do in *April* or *May*, when the Weather begins to be hot, it being the second Year before they are ripe; they may likewise be rais'd by Slips or Layers interr'd about the latter end of *August*, and kept moist. The Silver-Fir, the Gard'ners tell you, is to be rais'd no other way than by Seed, tho' I am of another Opinion in that I could never produce them that way, and I am rather inclined to think them produc'd of Layers; but this is a Secret I could never yet discover. As to the Seeds, do not take them out of the Cone or Clog till you use them, in which they will keep good two or three Years. The best time to sow them is in *April* or *May*; they should be very carefully kept from the



Mice before they get up, who are very desirous of them; and when they begin to peep, shelter them with Furze, or such sort of Fence, from the Birds, who are very apt to pull them up by taking hold of the Cap, which they commonly bear upon their tops when they first spring. The Beds wherein you sow them, had need be sheltered from Southern Aspects. Sow them in shallow Rills, not above half an Inch deep, and cover them with light Mould; and observe that those Seeds which bring up the Shell of the seed on their Heads, will either not grow at all; or but with Difficulty, if the sharp end of the Seed be set downward; because in that position, it must turn it self before it can get out of the Ground; for they shoot first from the sharp end. They will peep in about five or six Weeks time, and being risen two Inches high, establish their weak Stalks by sifting of some more Earth about them; for being heavy they are apt to swag so as often to blow out of the Ground. When they are of two or three Years growth, you may transplant them where you please; and when they have gotten good Root they will make very large Shoots, but not for the first three or four Years. When you Sow any Seeds of Fir, Pines, &c. there is sometimes a Worm which will destroy them at first coming up. Which, when you find, take some Tobacco dust and lay it in a small Circle, round the Plant, and I am told it will prevent their meddling with them.

They will grow on any dry Soil, especially the light *Soil*. hazelly Brick-earth, and refuse not moist barren Gravel, or any sort of poor or rocky Grounds or Clays, except they are too moist and spew, tho' the *Scotch* Fir delights in a moist Soil, and grows, as I am told, very well in the boggy part of *Ireland*.

The best time to transplant them, is from the middle to the latter end of *August* and *March*, or as some say, at the several times of the fall of their Leaves. Remove them with as much Earth about the Roots as you can, tho' the Fir will bear a naked Transplantation



tion better than the Pine. You may transplant them from the place where they are rais'd of Seeds; but if you design to plant them where the Cattle come, you must first remove them into a Nursery, where you may let them stand till they are eight or ten Foot high, and then plant them out, observing to water them well, and neither to bruise nor cut the tops; and when you prune them, leave the Stories about a Yard asunder; the best time of doing of which, is in the beginning of *March*, and be careful to rub a little dry Earth upon the Wound where you cut them, to stop the Turpentine, and to prevent their spending of themselves too much, which these Trees are very subject to do; and it will cause them to grow taper, to shoot in height, and to let the Wind thro' them, which may prevent their being blown down, and the breaking of their Boughs, which these Trees are very liable to during the Winter Gusts; and therefore, where you plant any of them, I should advise the planting of other Trees round them to shelter them, but be sure, on whate'er Soil you plant them, to let no Dung touch either their Body or Root; tho' if laid at a distance it will advance their growth, and if you plant them on Gravel-ground, Mud or Clay mix'd with it will do well to temper it, and if you mix Sand with Clay where the Soil is Clay, it will be better than Dung; but the sheltering of them with some Litter will do well to preserve them from the parching heat in Summer, and the cold in Winter.

There are several sorts of Pines, but amongst us not above three or four sorts; but as they are to be rais'd of Seeds, and order'd the same way, and delight in the same sort of Soil as the Fir, I shall refer you to the Directions of the Fir-tree for the ordering of them. Only note, that no Ever-greens will bear Loping well, tho' they will spare many of their side Branches in *April*. If they are of the tenderest sort, cut them three or four Inches from the body of the Tree, and the next Spring cut them close to the stem, and co-



ver the place with Wax, and well tempered Clay, and it will heal them.

They do not bear Transplantation so well as the Fir when large, and should be always removed with <sup>How trans-</sup> as much Earth as you can, and both Firs and Pines should be well water'd at first removal, and planted as <sup>planted.</sup> shallow as their Roots will allow of.

There is likewise the *Piceaster*, (a wilder sort of Pin) out of which the Pitch is boil'd, which grows both in the cold and hot Countries; the Body of which being cut or burnt down, Mr. *Evelyn* says, will emit Suckers from the Roots, which neither the Fir nor Pine will do.

I need not say any thing of the Use of these Trees <sup>Use.</sup> for Building, Masts, &c. it being so well known to most that have any occasion for them.

Chap. XXIV. *Of the Larch, Plantanus, Lotus and Cornel Trees.*

THE *Larch* or *Larix* Tree, Mr. *Evelyn* says, may be rais'd of Seed, and that it will grow in *England*, which he commends much for the largeness, durableness and usefulness of its Timber, and gives you an account of several Buildings in *Italy* made with it, which he says no Worm will touch nor hardly any Fire burn.

The *Plantanus* is a very beautiful Tree, and grows very well in *England*. It may be had at most of the Gardeners near *London*. It's rais'd by Seeds or Layers. It affects a moist Soil, and should be well water'd when transplanted. It is a fine Tree for Walks, and 'tis pity it is not more propagated.

The *Lotus* is a Tree frequent in *Italy*, that affords a fine shade, and very durable Timber. It affects a moist Soil, and the Roots of it are very fine for Hafts of Knives, and other Tools; and of the Wood are made Pipes and Wind Instruments.



The *Cornel* is a very durable Wood; and, as Mr. *Evelyn* says, is useful for Wheel-work, Pins, Wedges, &c. and will grow to a good stature with us. Its Berries are commonly very much used for Preserving and Pickling.

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### Chap. XXV. *Of the Cypress Tree.*

THE *Cypress* is of two sorts; the Sative or Garden-tree, which grows in the best form, and is the most beautiful; and that which is call'd the Male, which bears Cones, and is of a more irregular shape. This Tree is commonly much prejudic'd by the staking and binding it up to a pyramidical Form, which heats the inward Branches for want of Air, and occasions their Moulding, hindring of their growth, and is very troublesome and chargeable; whereas with clipping only, they may be brought to a much finer shape, and not be so liable to prejudice from their bandage, nor from the Frost. They also make fine Hedges when kept clipt, branching from the very Roots; the best time of doing which is in *April* and *August*. If they run too much without branching from the bottom, a discreet cutting of the principal Stem may be of advantage to make them shew beautiful, but a good Management of them while young may prevent that occasion.

*How raised.* They are raised of the Seed; Procure them in the Nuts, and when you have occasion to use them, expose them to the Sun, or put them in warm Water, and the Seeds may be easily shaken out. The time to sow them is in *April*, which do after this manner: Prepare a bed of fine Earth, and make it even, upon which strew the Seeds pretty thick, and sift more Mould upon them about half an Inch thick, keeping of them well water'd every Evening, except when the Season waters them, and after a Year's growth you may transplant them: When they are come up well, be sparing of your watering of them.

They



They will grow on any dry Ground, even Gravel *Soil.* and Sand, especially the Malefort, and will never be injur'd by Frost if they are not planted in a cold moist Soil.

The Timber is very lasting, and never cleaves but *Use.* with great violence. The bitterness of its Juice preserves it from Worms and Putrefaction. It is the best of all Timber for Building, and will last when either wet or dry.

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Chap. XXVI. *Of the Cedar.*

**I**T is a great pity the *Cedar* is not more propagated among us, being so easily rais'd, and a Tree that will grow so well with us. They are of several sorts and kinds, some of which do very much resemble the *Juniper*, which I cannot but think a Species of it, and therefore it might do well to be better encourag'd where the Soil is proper for it, to see what magnitude it will grow to. Other sorts of it are more like Cypress, as (according to the *London Gardeners Opinion*) those kinds growing in *New-England* and *Virginia* are: But the Cedar of *Lebanon* bears the severest Weather we have. I have rais'd several of them of Cones I had from thence, and have now a Walk planted with them; and wheresoever they are to be had of any sort, the Seeds may be brought from the farthest part of the World in the Cones, for I had some two Years old that grew as well as those that were brought me directly from *Mount Lebanon*; and I am apt to believe, if they are kept in the Cones, and not taken out till just you sow them, they may be kept three or four Years without prejudice.

They are rais'd of Seeds which seldom fail of grow-  
ing if order'd right, and if care be taken to preserve them from the Mice, who are very greedy of them. *How rais'd.*

They bear a Cone as the Pines do, but it is rounder and more like Scales; the same Observations are to be minded in the gathering of them, as that of the Pine;



Pine; only to open them, let them be steep'd in cold Water forty eight Hours, and the Seeds set as soon as taken out. The time of the setting of them is about the latter end of *March*, which sow on a Bed of good rich Mould, and lay it at least two Foot deep, but let no Dung come near them; and if your Bed be made a little sloping, it will do well, that the Water may run off from them, for too much wet is apt to burst the Seed. They cannot well stand too dry, if they are but shaded in dry Weather. As they come up, sift Earth about them to establish their Roots, as is before directed about the Pine.

*Soil.*

They delight most in a rich dry Soil, but they grow very well with me in *Essex*, both on the hazelly Brick-earths and on Gravel, that hath something of good Mould about a Foot and a half deep on the Surface of it.

*How transplanted.*

The best time of transplanting of them is at three or four Years old from the place where you rais'd them of the Seed. If the first Year you water them with a List, it may do well, and be of great advantage to them. Whether they may be removed at a larger growth, I have not experienc'd, and so can say nothing of it. They grow but slowly the first seven or eight Years, but I am told that after that, they grow with as much speed as most other sorts of Trees do.

*Use.*

I need not say much of the Usefulness of the Timber, being so much known. The fragrancy of which, its fine Grain for all sorts of Work, and its durability being able to recommend it for all Uses, besides the stateliness of it for Walks and Avenues, several of them being reported to be two hundred Foot or more in height. A Friend of mine assur'd me that he cut down one in *Barbadoes*, that had above four hundred Foot of Timber in it; but I am told there are some of a far greater magnitude.



Chap. XXVII. *Of the Cork, Ilex, &c.*

THE *Cork-tree*, with us, is of two sorts (and there are divers other Species in the *Indies*) one of which is of a narrower less jagg'd Leaf than the other, being a constant green, whereas the other is broader and falls in the Winter; it grows near the *Pyrenean Hills*, and in several Parts of *Italy* and the North of *New England*, especially the latter sort, which is the hardiest and best for our Climate; and that upon the worst of Soils, as dry Heaths, stony and rocky Mountains, where there is hardly Earth enough to cover the Roots. They may be had of the Gardeners at *London*, and I am told they grow very well with us, and bear our severest Winters.

This Tree hath three Barks, on the outer of which is the Cork, which they strip once in two or three Years in a dry Season, because the wet is apt to prejudice the Tree; and one of the other Coats being red, when they fell the Tree, bears a good price with the Tanner. The Wood is good for Fire, and useful for building Pallisado Work, &c.

The *Ilex*, or great scarlet Oak, thrives well in *Eng- Ilex.*  
*land*. They are a hardy sort of Tree, and easily rais'd of the Acorn. If we could have them brought to us well put up in Earth or Sand, they might be brought any where from Foreign Parts. The *Spaniards*, Mr. *Evelyn* says, have a sort they call *Enzina*, which bears Acorns, of which they have profitable Woods and Plantations: The Wood of which, when old, is finely chambletted as if it were painted; which Wood is useful for Stocks of Tools, Mallet-heads, Chairs, Axle-trees, Wedges, Beetles, Pins and Pallisadoes for Fortifications, being very hard and durable. Of the Berries of the first sort is extracted the Painters Lac, and the Confection of Alkermes. Their Acorns are good Food, little inferior to Chessnuts: But the *Kenne* Tree doth not always produce the Co-  
cum,



*cum*, except it grow near the Sea, and where it is very hot, and therefore they frequently cut down the old Trees that they may put forth fresh Branches, upon which they find them.

*Thuja*, or *Arbor vitæ*, grows of Layers or Slips to a tall straight goodly Tree, hardy in all Seasons. The Wood makes incomparable Boxes, Bowls, Cups, and other Curiosities; and the Leaf makes one of the best Oyntments for green Wounds, that is, closing of them suddenly.

*Box.*

*Box* deserves our Care because of the excellency of its Wood, and in that it will prosper on the declivity of cold, dry, barren Chalky-hills, where nothing else will grow; of which there are two sorts, the dwarf Box, and a taller sort that grows to a considerable Heighth. The dwarf Box is very good for Borders, and is easily kept in order with one clipping in the Year. It will increase of Slips set in *March*, or about *Bartholomew-tide*, and may be raised of Layers or Suckers.

It is of use for the Turner, Ingraver, Carver, Mathematical Instrument-maker, Comb-maker, &c. for which they give great Prices by Weight as well as Measure, especially the Roots (as even of our neglected Thorn) which is of great Value for Inlaying and Cups.

*Yew.*

*Yew*: Since the use of Bows is laid aside, the Propagation of this Tree hath been neglected, though it will grow on our coldest and barrenest Hills, especially if chalky, where it may be of use to propagate it for the same uses as Box, for most of which Purposes it is as good, besides which it makes extraordinary Axle-trees.

It is easily produced of the Seeds, which must be washed and cleansed of their Mucilage, and then buried in Sand made a little moist any time in *December*, and so kept in some Vessel in the House all Winter, and in some shady cool place abroad in Summer. The Spring come twelve Months after you have put them



them in Sand, sow them on a Bed, the Ground not too stiff. Some bury them in the Ground like Haws. It is commonly the second Winter before they peep, and then they rise with their Caps on their Heads. At three Years old transplant them. They may likewise be raised by Layers or Slips, and so planted out for Standards, Walks and Hedges, being to be clipped in what Form and Order you please, and therefore are much valued by our modern Planters, to adorn their Walks and Grass-plats.

*Juniper* is of three sorts, whereof one is much taller than the other, the Wood whereof is yellow, and if cut in *March* is sweet like Cedar, of which this is accounted a spurious kind. They should neither be shaded much nor dropt upon. They may be raised of Seeds, which will peep in two Months after sowing. They should neither be watered nor dunged; and being managed like Cypress, will make fine Standards; especially where they are not obnoxious to eddy cold easterly Winds, which are apt to discolour them, but they soon recover it again. To make it grow tall, prune it close to the Stem, and loosening the Earth about the Roots, hastens its growth much. It may be clipt for Hedges. It loves a gravelly Soil, and is raised mostly of Seed.

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#### Chap. XXVIII. *The Laurel.*

**T**HE *Laurel* or Cherry-bay is most commonly used only for Hedges, but being planted upright and kept for Standards, by cutting away the side Branches, so as to maintain only the principal Stem, it will rise to a large Tree, and carries a fine spreading Head, that is very ornamental and shady for Walks or Groves, and may this way be of much better use than to plant them in Hedges, as most do, where the lower Branches growing sticky and dry, by reason of their frequent and unseasonable Cuttings (the Genius of this Tree being to spend much in Wood)



Wood) causes them never to succeed after the first six or seven Years, but are to be new planted again, or abated to the Roots for a fresh Shoot.

They are raised of the Seeds or Berries with extraordinary Facility, or propagated by Layers, Slips and Cuttings set about the latter end of *August*, or earlier at *St. James's-tide* in a shady moist place, they delighting most in a moist cool Soil.




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## B O O K XII.

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### Chap. I. *Of Coppices.*



**A**S for Coppices or Under-wood, I have already shewed how each particular sort of Tree is to be raised both by sowing and planting, and for the raising of Coppices, great care ought to be taken that the Wood they are to be composed of, be such as is proper for the Soil you raise them on, and that the sort of Wood is proper for such Uses as you design to sell your Wood for, which you must be regulated in by the vent you have, as whether it is for Fire-wood, for which the Oak, Horn-beam, and other hard Wood is best; or for Hoops, Hop-poles, &c. for which the Ash, Chessnut, Oak, Hazel, &c. is the most useful, as I have already shewed; and according to the Profit of your Under-wood, regulate the thickness of your Standards, which as they are thicker or thinner, do more or less Injury to your Under-wood. You are likewise to consider at what Growth you can sell your Under-



Under-wood, only remember, that the older and taller your Under-wood is, the better it is for Fire-wood, and the better it is for what Standards you leave, because they will be the taller and straighter by being forced up by the Wood that grows about them; though a deep Soil, as I observed before, contributes much to their spiring, and according to the time of your felling, it is necessary to lay out your several Falls, that so you may have an annual Succession to yield a yearly Profit, which in many Places is from eight Years to twenty or thirty: But though the seldom felling of Wood yields the more and the better Timber, yet the frequent cutting of Under-wood makes it the thicker, and gives room for the Seedlings to come up. If many Timber Trees grow in the Coppice which are to be cut down, fell both them and the Under-wood together, cutting off the Stubs as near the Ground as may be, and the Stubs of the Under-wood asloap and smooth, and not above half a Foot from the Ground, and stock up the Roots of the Timber Trees, if they send forth no Shoots, (which they are not apt to do if sawn down, which is the best way of felling of Timber Trees) to make way for Seedlings and young Roots to shoot; but where you design to sow Seeds, you must prepare your Ground with good Tillage, as much as you do for the sowing of Barley; and about *February* sow them, and if the Soil be shallow, plow your Ground into great Ridges, and it will make the Soil lie the thicker on the top of each Ridge, by which means the Roots will have the more depth to search for Nourishment, and the Furrows will in a little time be filled up by Leaves, which when rotten, will lead the Roots from one Ridge to another; and if you sow them on the sides of Hills that are dry, plow your Ridges cross the descent of the Hills, that the Water may be kept on the Land without having too sudden a descent; and if your Ground be very wet, observe just the contrary. Some sow their Seeds with a Crop  
of



of Corn; but as the Season for the sowing of Corn is too late for the Seeds, it is better to sow them by themselves, and be sure to keep them well weeded the first and second Years. But if you have a mind to raise Wood on very barren dry Land, sow it with what Fruit or Seeds you design it for, and with them sow Furz or such Trumpery, as will grow on the worst Land, and it will become a shelter to your Trees, which when they have once taken Root, will soon out-grow the Furz, and kill it with their dropping. For the raising of Coppices, the nearest distance for the Plantations ought to be about five Foot for the Under-wood; but as to what number and scantlings of Timber, you are to leave on each Acre, the Statutes direct, and it is an ordinary Coppice which will not afford three or four Firsts, that is, Bests, fourteen Seconds, twelve Thirds, and eight Wavers, &c. according to which Proportion the sizes of young Trees in Coppices are to succeed one another. By the Statute of the 35<sup>th</sup> of *Henry the VIII.* in Coppice or Under-wood felled at twenty-four Years growth, there were to be left twelve Standlings or store Oaks upon each Acre; and in defect of so many Oaks, the same Number of Elms, Ash, Asp, or Beech, and they to be such as are likely Trees for Timber which are to be left, and so to continue without felling, till they are ten Inches square within a Yard of the Ground. In Coppices above this growth when felled are to be left twelve great Oaks, or in defect of them, other Timber Trees as above, and so to be left for twenty Years longer, and to be enclosed seven Years.

However, I think it better to leave a much greater number of Timber Trees, especially where Under-wood is cheap; and as to the felling, begin at one side, that the Carts may enter without detriment to what you leave standing; where your Woods are large, it is best to have a Cart-way along the middle of them, by which means you may fell on each side



side where you will, and have a Cart-way always ready without prejudice to the rest of the Wood. The Under-wood may be cut from the beginning of *October* to the latter end of *February*, but *February* is the best Month to cut Wood in, where you have but a small quantity to fell, that you may do it before the Spring comes on too much: Take great care to prevent the Carters brushing against the young Standards, and let all your Wood be carried out by Midsummer, and made up by the end of *April* at the latest; for where the Rows and Brush lie longer unbound or unmade up, you spoil many of the Shoots and Seedlings. If the Winter before you fell, you inclose it well, so as to keep all Cattle out of it, it will recompense your Care and Trouble.

By the Statute Men were bound to inclose Coppice-wood after felling, if under fourteen Years growth, for four Years; those above fourteen Years growth to be six Years inclosed; and for Woods in Common, a fourth Part to be shut up, and at felling the like Proportion of great Trees to be left, and seven Years inclosed; this was enlarged by the 13<sup>th</sup> of *Elizabeth*. Your elder Under-wood may be grazed about *July*, or in Winter; but for a general Rule, newly wean'd Calves are the least prejudicial to new cut Wood where there is an abundance of Grass, and some say Colts of a Year old, but then they must be drove out at *May* at farthest; but if nothing at all be suffered to come in, it is better, every Man's Experience being able to direct him.

If your Woods happen to be cropt by Cattle, it is best to cut them up, and they will make fresh Shoots; whereas what is bit by the Cattle, will else stunt for several Years before it will take to its growth.

If your Woods are too thin, lay down Layers of the longest and smallest Shoots you can find of such kinds of Wood as you like best to have your Coppice of, or that is nearest to the bare place where you want a supply, according to the Methods already



proposed for the laying of Layers of Trees, and they will send forth abundance of Suckers, and thicken and furnish a Coppice very speedily.

As to the size of Faggots and Wood-stacks, &c. it differs in most Countries, and therefore you must in all those things be guided by the Custom of the Country where you live, the Prices of which, and the stacking up of Wood, Roots, stumps of Timber Trees, &c. I shall give you an Account of hereafter, when I come to consider the Prices of the Husbandman's Labour and Charges. I shall at present only Note one thing, and that is, that when the Workmen have bound up the Faggots, with their Bills they trim off all the straggling small Branches to make the Faggots more neat and tight, which Trim-mings they commonly gather up and put into the middle of the next Faggot, where it is of little Advantage, but would be of much greater Profit to the Land, if it were left to rot in the Wood, for which it is as good as Dung, and would much advance the growth of your Trees, as I have known by Experience; for though the Leaves falling and rotting in Woods do much improve them, yet it is not to be compared with the Advantage that they receive from rotten Wood, which will turn any Soil whatsoever into a rich black Garden Mould, as may be found by Experience by any that will make Observation of it where Wood-stacks have stood; and though those Sticks are but small, and cannot do much the first time, yet a constant Repetition of it every Fall is a much greater Improvement of Wood than can easily be believed.

The best time to fell Timber is in *January* or *February*, because the Sap is then all down in the Root, but the Oak they commonly fell about *April* or *May*, when the Bark will run, which they are obliged to do by the Statute, because of the Bark for the Tanner, which is a very great prejudice to the Timber: But the Opinion and Practice of Men have



been very different concerning the best time to fell Timber. *Vitruvius* is for an Autumnal Fall; *Cato* was of Opinion, that Trees should not be fell'd till their Fruit was ripe, and tho' Timber unbark'd be obnoxious to the Worm, yet we find the wild Oak and many other sorts of Trees fell'd late (when the Sap begins to be proud) to be very subject to the Worm too; whereas being cut about Mid-winter, it neither casts Rifts nor Winds, because the cold of the Winter both dries and consolidates it.

Some Authors advise in felling of Timber to cut it but into the Pith, and so let it stand till it be dry, because, say they, by drops there will pass away that moisture which would cause Putrefaction; others advise, to bore a hole in it with an Augre for the same Purpose, but I suppose a nipping Frost will effect the same, by causing the moisture to descend into the Root, not that I would have them fell'd in frosty Weather, but not fell'd till a hard Frost hath been upon them. In *Staffordshire*, they bark their Timber Trees in *April*, when the Sap will run; and the next Winter about *December* or *January*, they fell them. This they say makes the Timber firm and good, and not subject to the Worms.

When the Stubs of your Under-wood are great, stock them up, this is a good piece of Husbandry, because it makes way for Seedlings and young Roots that are thriving, whereas when the Stumps are old and large, they are apt to let in the Water and be unthrifty; the time of doing which is in the Winter Season.

When you fell your Woods, leave young Trees enough, you may take down the worst at the next Fall, especially if any grow near a great Tree, that you think may be fit to fell the next Season, to supply its place, because several may be spoil'd by its fall.

When Trees are at their full growth, there are several signs of their decay, as the withering or dying of any of the top Branches; or if they take any Water in at any Knot; or are any ways hollow or discolour'd;



if they make but small Shoots; if Wood-peckers make any holes in them; also a very spreading Tree in a Wood, is many times very prejudicial, because of the young Trees it drops upon, according to the Directions of the Poet.

*To fell those Trees can be no loss at all,  
Whose Age and Sickness would your Ax forestall;  
A youthful Successor with much better Grace,  
And Plenty will supply the vacant Place.*

Lastly note, That if you sell your Wood by the Acre, you must take great care before-hand to mark out what Standards shall be left, or else the Wood-Buyers will be very apt to deceive you; and observe that all Wood-Lands are measured by the eighteen Foot Pole.

## Chap. II. *Of Transplanting of Trees.*

**T**HE smallest Trees, and those that have been transplanted in Nurseries, &c. are the best to remove, as I have already observ'd; but as the removing of Trees is commonly upon the account of the making of Walks, Avenues, Groves, or to fill up Hedge-rows where Cattle come, it's necessary that they should be of a size so big, as with some shelter they may be out of danger of being spoiled by Cattle; for which purpose, I reckon Trees that are of about five or six Inches in Circumference, and six Foot and a half or seven Foot high, to be the best, and the best size both upon account of the Trees and of the Cattles reaching to crop them. In Cases of necessity, Trees of very great Stature have, according to the account given by Mr. Evelyn, been removed upon particular Occasions; the way of doing of which, tho' it is too troublesome for ordinary planting, yet as it may be of use upon some Occasions, I shall propose it according to the Method he has laid down, which is,



To chuse a Tree as big as your Thigh, remove the Earth from about it, cut thro' all the side Roots till you can with a competent strength enforce him down on one side, so as to come with your Ax at the Tap-root, which cut off, and re-dressing your Tree, let it stand cover'd with the Mould you loosened from it, till the next Year or longer, if you think fit; take it up at a fit Season, and it will have drawn new tender Roots fit for Transplantation.

Or else a little before the hardest Frost surprize you, you may make a Trench about the Trees at such distance from the Stem, as you judge sufficient for the Root, which dig of a competent depth so as almost to undermine it by placing of Blocks and Quarters of Wood to sustain the Earth; this done, cast in as much Water as may fill the Trench, or at least sufficiently wet it, unless the Ground were very wet before; let it stand till some very hard Frost doth firmly bind the Earth to the Roots, and then convey it to the Pit prepared for its new Station, which you may preserve from freezing by laying store of warm Litter in it, and so close the Mould the better to the straggling Fibres, placing what Earth you take out about your Guest to preserve it: But in case the Mould about it be so ponderous as not to be removed by any ordinary force, you may then raise it with a Crane or Gin, and by this means you may transplant Trees of a large Stature to supply any defect, or for the removal of a Curiosity: The best sort of Trees to remove large is the *Elm*, especially if to be plac'd in a moist place.

The best time for the removing of all Trees, except Winter Greens, of which I have particularly treated, is either in *October* or *February*, as I said before: But if the Soil be moist, 'tis better to plant in *March*, that so the Trees may not stand sobbing all the Winter to chill their Roots. Though I have several times for a Curiosity removed some sort of Trees at *Midsummer*, that have prosper'd very well, which I did after this manner; I made a hole large  
F 3 enough



enough to contain the Roots of the Tree I designed to remove, into which I pour'd Water, and in that Water I put the Earth I took out of the hole, so as to make it a meer soft Sludge or Mud, and having taken up my Tree with as many Roots as I could, and abated the Head with the same Caution, I plung'd the Root into the Mud in the hole, where I let the Tree stand without taking any farther care of it, except daily watering for about a Fortnight or three Weeks: And such Trees have grown as well as those planted in Winter, but then they were small Trees. But as for the common Rules of Planting;

1. Observe to set your Trees deeper in light Ground than in strong, but shallowest in Clay; six Inches is sufficient for the driest, and two or three for the moist, provided you establish them from the Winds, and shade them from the heat of the Sun; the best way of doing which is by Stakes, and round the Stem of the Tree to raise a small Hill about two Foot thick, and four or five Foot in Diameter, which cover with Stones, Tiles, or mungy Straw, to keep it moist, and to prevent the Weeds growing, taking care after a competent time to remove them, else the Vermin, Snails and Insects which they produce and shelter, will gnaw and injure the Bark, and be sure not to plant any Trees deeper than they grow, before they were removed. Abate about half a Foot of the height of the Hill, every Year, till they become level with the rest of the Earth round the Tree, and carefully pull up what Weeds grow about them, because they draw away the Heart of the Soil which should give Nourishment to the Tree.

2. Where you dig your Holes for Trees, if it is in a Gravel Soil or Sand, mix Clay, or, which is better, Earth, Loam or Mud with the Earth you fill into the Holes again; and if it is a stiff Clay, trench it with Straw, Thatch, Litter, Wood-Stack-Earth, &c. but let not the Roots touch any of these Mixtures, nor yet any Dung or Turf, but lay your Dung rather  
round



round upon the Surface of the Earth, and dig it in a little, covering it with Mould to keep the Sun from drying of it. When you dig down your Hills, or dig about the Roots of your Trees, (which you should mind carefully to do once a Year, the Advantage of which I will prove to you afterwards) and where-ever you plant Trees, make your Earth as fine as you can.

3. For Trees, or most sorts of Plants, the strong blew, white or red Clay, are some of the worst Soils; but if any of these Lands have some Stones naturally in them, or the nearer they are to a Loam, by any mixture of Sand, they are much the better; so likewise is gravelly or sandy Grounds, the nearer they are to a Loam, by a mixture of Clay; for a Loam or light brick Earth, compos'd of a due mixture of Clay and Sand, I reckon to be the best Land for Trees.

4. Plant in a warm moist Season, the Air being tranquil and serene, the Wind westerly, but never when it freezes, rains, or is misty, for it moulds and infects the Roots; and if you Water any Trees you have new planted; it will settle the Earth the better to the Roots, and keep them moist; only observe, not to transplant if you can help it, any Trees after *Michaelmas*, till you have had some Rain to moisten the Ground; because the Trees will rise with less Labour, and be better rooted, the Roots being apt to break when the Ground is dry. Large Trees may sooner be removed in *October* than smaller ones.

5. Trees that have not been transplanted, or others that have, if their Roots go deep, you must have them abated, or else you will be necessitated to place them too deep; only the small fibrous Roots must be spar'd as much as you can, for they are what affords the chief Nourishment to the Trees, and take them up with as much Earth as you can, letting the Holes, into which you transplant them, be left open for the Rain, Frost and Sun to mellow the Earth sometime before you plant them.



6. If you take up a Tree, mind how the Roots grow, and dispose of them in the same order where you new place them, spreading of the Roots carefully, observing to place the Tree to the same Aspect that it grew before.

7. In the Spring rub off the side Buds to check the exuberancy of the Sap in the Branches, and to cause it to run up to the Head.

8. Transplant no more Trees than you can fence well from Cattle, especially from Sheep; the Grease of whose Wool is very prejudicial to Trees, where they can only come at them to rub them. All young Trees should likewise be defended from the Wind and the Sun; especially those of a tender sort from the *North* and *East*, till the Roots are fixed, and that you find them begin to shoot; the not exactly observing of which Point is the cause of the perishing of most of our Plantations in Summer; and in Winter there is more danger to be feared from wet and cold, in Conjunction one with another, than the severest Frost alone.

9. Wood well planted will grow in moorish, boggy, heathy and the stoniest Ground; only the white and blew Clay is the worst for Wood, as I said before; and what large Timber you find in either of them (the Oak only excepted) is of a very great Age.

10. If the Season require it, all new Plantations are to be well watered in *April*, at their first budding, especially the first Year of their planting, upon which depends much of their future growth, and what Water you pour on them let it be in a Circle, at some distance from the Roots, which should continually be bar'd of Grass and Weeds; and if the Water be rich, or impregnated with any Manure, the Shoots will soon discover it, for the Liquor being percolated or strain'd thro' the Earth, will carry the nitrous virtue of the Soil with it: By no means water at the Stem, because it washes the Mould from the Roots, and lets the Water come too crude to them, which often en-

dangers



dangers their rotting. If you fear dry Weather, do not defer too long before you water your Trees or Seeds, but water while your Ground is yet moist that it may keep so.

11. Young Trees will be strangled with Corn, Oats, Peas, Hemp or any rank growing Corn or Weeds, if a competent Circle and Distance be not left (as of near a Yard or so) from the Stem.

12. Cut no Trees that have any large Pith in them, especially being young and tender, when either Heat or Cold are in their extrems; nor in wet or snowy Weather, tho' the discharging Trees of unthrifty broken Wind-shaken Boughs is a very great advantage to them when done in a good Season. *Ever-greens*, especially such as are tender, prune not just after planting, but when you find by some small fresh Shoot they have taken Root.

13. If you plant Fruit-trees, reduce them to a Head as soon as you can. As for Timber-Trees, it is best not to head them at all, but to shred them up to one single Bough, if the Soil be good that you plant them in; but if bad, the Sap will hardly run so high; and therefore in such Case it is better to head them; and when they are shot out, reduce the head to one single Branch; for which purpose, leave one of the most upright and thriving Boughs; and if your Top die, or your Tree meet with any prejudice from Cattle, so as to occasion its breaking out of the Sides, which impedes both its Growth and Spring, prune off some of the Shoots, and quicken a leading Shoot with your Knife at some distance beneath its Infirmary; but if it be in a very unlikely Condition at Spring, cut off all close to the Ground, and hope for a new Shoot, which nurse up by cutting away all superfluous Branches. If you would not have a Tree put forth side-Branches, prune them up in *February*, and whatsoever side-Branches it puts out after, cut off at *Midsummer*, when the Sap is in them, and they will hardly ever sprout again; tho' you must be cautious not to  
cause



cause your Tree to have too great a Head for the Body; especially if it is of a tender Wood, lest the Wind break it; the way to prevent which, is lopping or thinning of the Head, or letting of the more side-Boughs grow out of it to check the Sap from running all into the top Branches.

14. *Wallnut, Ash* and Pithy Trees you must by no means head when you transplant them; especially the *Wallnut*; and if you have occasion to lop off any of the Boughs, do it where they may be the least expos'd to the wet, which I reckon the side-Boughs to be; and late in the Spring, as about the latter end of *February*, or beginning of *March*, that the Bark may the sooner heal the Wound.

15. Trees will grow well upon almost any Soil, that is full of Fern; because it shades the Roots and keeps them Cool, even upon the hottest burning Gravel.

16. If you plant on a shallow or a very moist Soil, plow it into large high Ridges, and plant your Trees on the middle of the Ridges.

To preserve Trees from Winds and Cattle that are expos'd to them, empale them with three or four quarter Stakes of a competent heighth, set triangular or quadrangular, and fasten them by one another with short pieces above and beneath, in which a few Brambles may be stuck; except you will be at the charge of Pales, which will secure them without that fretting which Trees are otherways liable to that are only single stak'd and bush'd; but where Cattle don't come, a good piece of Rope ty'd about the Neck of the Tree upon a wisp of Straw to preserve them from galling, and the other end lightly strain'd to a Hook or Peg in the Ground, will sufficiently stablish the Tree against the Western Blasts, the Winds of other Quarters seldom doing them much mischief. If the Cords are well pitch'd they will last many Years.



*Chap. III. Of Planting of Avenues, Walks, &c.*

**M**OST Walks should be made to lead to the Front of an House, Garden-gate, High-way-gate, or Wood, or to terminate in a Prospect; in all which cases most People are apt to plant their Walks too narrow, so as not to give a fair Prospect of what they are design'd for; as suppose them planted for an Avenue to an House, whatever the length of the Walk is, it ought to be as wide as the whole breadth of the Front; and if it be long, the wider it is the better: And for Walks to Woods, Prospects, &c. they ought to be at least sixty Foot in breadth; and because such Walks are a long time before they are shady, I would propose to plant a narrower Row on each side, rather than lose the stateliness that the main Walk will afford by being broad, especially where any thing of a Prospect is to be gain'd; and if the Trees are any thing of a spreading kind, I would not have them planted nearer together than thirty five or forty Foot in the Row; and the same distance is to be observ'd if they are planted for a regular Grove.

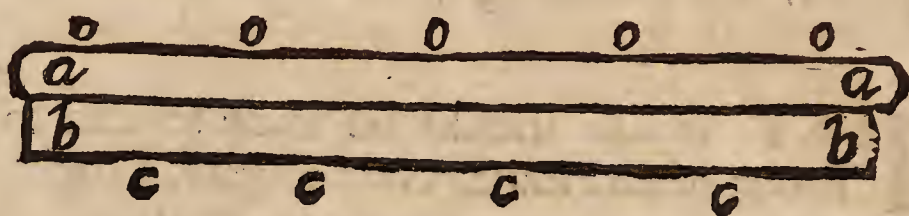
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*Chap. IV. Of the Planting of Trees in Hedges.*

**T**HE best way of raising Trees in Hedges, is to plant them with the Quick, if you can preserve them well from Cattle; but where Hedges are planted already, and Trees are wanting, I should propose to plant them after this manner, as doing least damage to the Hedge, and as affording the best Shelter, and giving room for the greatest number of Trees to be planted,



planted, Let *a a* be the Bank that the Hedge stands on, and *b b* the Ditch, and let all the Trees be planted



not on the Bank where the Hedge stands, as the common way is, but at the bottom of the Bank, about a Yard from the Hedge; which will prevent their dropping on it, as at *o o o o o*: And over-against them, on the other side of the Ditch, about a Yard from it, not in a direct Line, but in the Intervals, let another Row be planted, as at *c c c c*; and if each other of these Trees be a spiring Tree, and the odd one between, a Fruit-tree to spread, they may be planted the nearer together, and will afford the better Shelter.

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#### Chap. V. *Of the Infirmities of Trees.*

**T**Here are several Diseases and Casualties that spoil Trees, and affect the several parts of them, that are carefully to be look'd after.

1. Weeds, such being diligently to be pluck'd up by hand after Rain as can be so eradicated; especially while the Trees are young, and not able to over-drop them; but for the stronger Weeds, they must be extirpated with the Howe, Spade, or other Instruments, being very prejudicial to the Trees in robbing them of their Nourishment, and in choaking such as are young.

2. Suckers should be cut off close to the place they put out from, opening the Earth that you may come well at them; and if you find them rooted, you may set them again: But they say, Trees grafted upon them are more apt to produce Suckers than other Trees.

3. Over-much Wet often prejudices Trees, especially such kinds as require drier Ground, which is to be



be help'd by Drains ; and if a Drip fret the Body of a Tree by the Head ( which will certainly decay it ) cut first the Place smooth, and apply to it, so as to cover the Wound, some Loam or Clay mixed with Horse-dung, which keep to it till a new Bark succeed, or take refined Tallow, which mix with a little Loam and Horse-dung newly made, and apply ; only note, that Wounds made in a Tree in Winter, are much harder to cure than those made in Summer.

4. If a Tree is Bark-bound, slit through the Bark from the top to the bottom in *February* or *March*, which will do most Trees good, but no harm to any ; and if the gaping be much, fill the Rift with Cow-dung : Also the cutting off of some Branches is profitable, especially such as are any ways blasted or Lightning-struck ; and so is digging about the Tree, it being many times occasion'd from the baking of the Earth about the Stem.

5. The *Teredo*, *Cossi*, and other Worms lying between the Body and the Bark, poison the passage of the Sap, to the great prejudice of the Trees ; but the Holes where they lie being found out, open them, and make a small slit from the bottom of them to let any moisture that may fall in them, run out, and do the Place over with Loam.

6. Trees, especially Fruit-bearers, are often infected with the Measles by being burn'd and scorched with the Sun in great Droughts. To this commonly succeeds Lowfiness, which is cur'd by boring a hole into the principal Root, and pouring in a quantity of Brandy, stopping the Orifice up with a Pin of the same Wood.

7. Excorticated and Bark-bar'd Trees may be preserv'd by nourishing up a Shoot from the Foot or below the stripp'd place, cutting the Body of the Tree sloping off a little above the Shoot, and it will quickly heal and be cover'd with Bark like a Tree new grafted ; and if you cover the top with Clay and Horse-dung in the same manner as you do a Graft, it will help to heal the sooner.

8. Deer,



8. Deer, Conies, and Hares, by barking of Trees, often do them very great Mischief, and many times destroy them quite. To preserve them from Deer, fence them with Pales; but to preserve them from Conies and Hares, Mr. *Evelyn* proposes the anointing of them with *Stercus humanum* temper'd with a little Water or Urine, and lightly brush'd on; this to be renewed after every Rain, or to sprinkle Tanners Liquor on them, which they use for dressing their Hides; also tie Thumb-bands of Hay or Straw round them as far as they can reach. I have not experienced any of these ways; but Tar and Lime, which I have known some use, will bind the Bark, and make it so hard that the Tree will not thrive.

9. Moss is to be rubbed and scraped off with some fit Instrument of Wood which may not hurt the Bark of the Tree, or with a piece of Hair-cloth, after a soaking Rain. But the most certain way to cure it is by taking away the Cause; which is, to drain the Land well from all superfluous Water, and to prevent it in the first planting of your Trees by not setting them too deep. But Moss growing on Trees is of several sorts, cold and moist Ground produces a long shaggy, moist and dry Ground a short thick Moss. If the Moss is much and long, so as to smother the Branches, it may in such Case do well to prune off the greatest part of the Branches, and to Moss the rest, or to take off all the Head, and the Tree will shoot, and as it were become young again, and if your Plantation is too thick, which will in cold Ground occasion Moss, you must mend the fault by thinning of them, but if it proceed from the dryness of the Ground open it, and lay Mud on it, which will both cool it, and also prevent the falling of the Fruit, and of its being Worm-eaten, which is what is incident to dry Grounds.

10. Ivy, Briony, Honey-suckles, and other Climbers, must be dug up, lest they spoil your Trees by pinching and making them crooked.

11. Wind-



11. Wind-shock is a Bruise and Shiver throughout the Tree, but not always visible, twisting the Warp from smooth-renting, being occasioned by High-winds, and perhaps by subtil Lightnings, those Trees being most in danger of it, whose Boughs grow more out on the one side than the other. The best prevention is Shelter, choice of place for the Plantation, and frequent shredding up while young.

But as the Winds often spoil Trees by twisting them, they many times do them as much Mischief in prostrating of them; which, though it cannot properly be called an Infirmary of the Tree, yet the Winds are many times a principal Cause of rendring them infirm, for which there is no better Remedy than what is already proposed: But in case any Trees should chance to be blown down which you desire to preserve or redress, be not over-hasty to remove them, but cut off their Heads, and let them lie, and many times the weight of the Roots will bring them up; but if not, take some of the loose Earth out of the Hole that the Tree hath made, and cut off some of the straggling Roots that hinder it from falling back, and you may easily redress them.

12. Cankers are caused by some stroke or galling, or by hot burning stony Land. They must be cut out to the quick, and the Scars emplastered with Tar mingled with Oil, and over that Loam thin spread; or else with Clay and Horse-dung, but best with Hogs-dung alone bound to it with a Rag, or by laying Ashes, Nettles, or Fern to the Roots, &c. But if the Canker be in a Bough, cut it off; if a large Bough at some distance from the Body of the Tree, but if a small one, cut it close to it. But for over-hot stony Land, you must cool the Mould about the Roots with Pond-mud and Cow-dung: And for Fruit-trees, the best way to raise them on such Land, is to graft them on Crab stocks raised in the same Mould.

13. Hollowness is contracted by the ignorant or careless Lopping of Trees, so as that the wet is suffered



ferred to fall perpendicularly upon any part of it, especially the Head: In this case, if there is sufficient sound Wood, cut it to the quick close to the Body, so as to make it as sloping as you can, that the wet may fall from it, and cap the hollow part with a Tarpaulin, or fill it with good stiff Loam, Horse-dung, and fine Hay mixed together. This is one of the worst Evils belonging to Trees, and what all soft Woods are very liable to if lopped; especially the Elm, which is much better to be shred up, the side Boughs of which will yield a constant Lop, and the Bodies afterwards be good Timber; whereas when lopped they soon decay and perish; though many times a spire Elm will begin to grow hollow at the bottom when any of its Roots happen to perish; but the unthriftiness of its Branches will quickly discover it.

14. Hornets and Wasps do mischief to Trees by breeding in them, which are destroyed by fuming of their Cells in the Night with Brimstone, or by stopping up their Holes with Tar and Goose-dung.

15. Ear-wigs and Snails do seldom infect Timber Trees, but are very prejudicial to Fruit; and so are likewise Pismires, Caterpillars, Mice, Moles, &c. of which I have already treated.

Mice, Moles, and Pismires cause the Jaundice in Trees, which is known by the discolour of their Leaves and Buds.

16. Blasted parts of Trees are to be cut away to the quick; and to prevent it in the Blossoms, smoak them in suspicious Weather by burning moist Straw, or the superfluous Cuttings of Aromatick Herbs, as Rosemary, Lavender, Juniper, &c.

17. Rooks do great prejudice to Trees by cropping off the tops of old ones, and by lighting on young ones; whose weight breaks the tender Branches and often spoils their Tops: They also destroy Seedlings where they breed, and their Dung breeds Nettles and Weeds.

18. If



18. If a Tree has grown well for several Years, and begins to abate of its thriving, lop off some of the Branches, and see if that will cause it to shoot with Vigour; if not, dig away the Earth 'till you come at the Roots, and see if they are spoiled with any Rottenness, which may be occasioned by their being planted too deep, or from a cold Soil underneath; but if you find the Roots sound, you may conclude, the disease of the Tree proceeds from the poorness of the Soil; to mend which, put new fresh Earth next the Roots, mend the upper part of the Soil with Cow-dung if the Soil is hot, if cold with Horse-dung; and when the time of pruning comes, cut away most part of the old Wood, and you'll find it shoot again afresh; if not, you may conclude it decayed with its Roots or Trunk, for which there is no Remedy.

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### Chap. VI. *Of Pruning Forest-Trees.*

**A**S to the Pruning of Trees, it is a Work that requires a great deal of Skill and Care, and for which general Rules cannot well be given, because of the great Variety which is met with in doing of it; only you may observe, that whatsoever Shape you design your Tree shall have, form it to that Shape as much as you can while it is young, because young ones will best bear Pruning, when their Boughs are small, and soonest heal when cut off: But for those Trees which you design for Timber, be cautious of cutting off their Heads, as I told you before, especially those that have great Piths, as the Ash, Walnut, &c. and all soft Woods, as the Elm, Poplar, &c. But if your Trees grow too top heavy, you must abate the Head to lighten them, which in many Trees it is better to do by thinning of some of the Boughs that shoot out of the sides of the main Branches, so as to let the Wind have a passage through them, than by cutting off the main Branches themselves, especially



ally if you design them for spreading Trees; but if you design them for spiring Trees, it is best done by rubbing off the Buds as they put out in Spring, and by shredding up the side Shoots, which must be done sparingly, so as to leave here and there a Bough; and when any new Shoots put out, you may save them, and cut off the former, always taking care to cut off the largest, and leave the smallest to give a check to the Sap where it runs too much up to the Head, so as to endanger the breaking of it where the Body is too weak; but where it is strong and able to bear it, you may be the bolder in shredding of it up, minding alway to proportion the Head to the Body by keeping of it small, and by maintaining of the leaden Shoot, and particularly taking care that it do not run up with a Fork 'till you have got your Tree to the intended height, then let the Head break out, and cut off all the side Boughs if you find occasion; and if you find the side Boughs still breaking out, and that your top is able to sustain it self, to the Boughs that put out in Spring, give a Summer pruning a little after Midsummer, cutting them very close; this will cause the Bark to cover them and kill them so as not to shoot out again, as I said before; which is the only way to make your Tree grow with a fine straight handsome Body. But I know most are against pruning Timber Trees at all; and I grant that where Trees do naturally grow straight it is better; but I cannot think the pruning of a young Tree, provided you cut the Boughs close, can do them any great harm; because, I believe, if they heal the Wound quite, or if they do not, the cut lying near the Pith can be no prejudice if the Tree is used for a Beam, or for any other occasion where it is used square; or for any other uses that require its being quartered; because it brings any such Defects to be near the edge, and so the four parts will be sound: As for great Trees, that is, Forest Trees, (for of Fruit Trees I design to treat in another place) I am not for pruning them



them at all, except in cases of very great Necessity; and in such cases avoid the cutting off large Boughs as much as you can; but whatsoever Boughs you cut off, if it is small, cut it off smooth and close, so as the Bark may quickly cover it; and sloaping, so as the Water may run off and not soak into it; but if the Bough is large, and the Tree old, cut it off at some distance from the Tree, as at three or four Foot, or where you find any young Shoots coming out of the sides of it; but by no means leave any Stumps to stand out at any distance, because they cannot be covered by the Bark, 'till the Diameter of the Tree grows beyond it, and in the mean time the Stump will be continually rotting, and a Conduit-pipe to convey Water to the heart of the Tree, which will certainly decay and kill the whole Body: And all Boughs that grow upright, be they great or little, cut them not right cross over, but sloaping upwards; and those Boughs that lean from the Head, cut the sloap on the lower side; and if you have occasion to make any great Wounds, cover them over with Clay mixed with Horse-dung, and they will heal the sooner, as I said before.

You may observe in many Forests and Woods, where you have one thrifty Tree, you have twenty unthrifty Ones, and all occasioned from the want of pruning, which is not only a renewal of their Age, but also of their Growth too, the want of it being what occasions Trees to run out with Suckers, and overload themselves with wasteful Boughs, which draw all the Sap from the Bole, especially the upper part of it, and make it knotty, mossy, and unthrifty.

But if your Tree grow crooked, at the crooked place cut it off sloaping upwards, and nurse up one of the principal Shoots to be a leading Shoot, except it is of such a sort as is subject to die when headed, of which the Beech is one of the worst to head; or if any Trees are very great, do not meddle with them; but crooked Trees may be made straight by shredding



up of the side Branches 'till you come above the Crook, where they are young.

If any Boughs are cropt by Goats, or other Cattle, cut them off close to the Body, for Cattle leave a drivel where they Bite, which not only infects the Branches, but sometimes endangers the whole Tree.

The best time to prune Trees is in *February*, which should be repeated where need of Pruning is every Year, or every second Year, that so the Tree may easily over-grow the Knot, and the place will not be very subject to put forth Suckers, because the Sap hath had no great Recourse to it; only observe, that if you are to cut a Bough of any bigness, that you give it a chop or two underneath, lest when it falls it strip part of the Bark away with it; and likewise, that if you keep any Trees for Pollards, that you head them every ten Years; for if you let the Boughs grow large, they will be the longer before the Bark covers them, and be apt to let Water into the Body, which will soon spoil their bearing of Lop. Vid. *Pruning of Fruit Trees*, Book 14. Chap. 18.

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### Chap. VII. *Of the Age and Stature of Trees.*

AS to the Age, Stature, and Growth of Trees, I shall refer you to Mr. *Evelyn*, who is very copious in this particular; and only observe, that the growth of most Trees, for the Circumference of them (it being easily seen what length the Top shoots grow) is from about one to two Inches in a Year, and that the Increase of small and large Trees is much the same, provided they are alike thrifty. I have an Oak that grows in the middle of a Corn-field that is constantly plowed about, and the Cattle often lie under it and dung it, growing upon a red brick Earth, that is at least forty Foot deep, whose Increase is some Years four Inches in a Year, whereas the common growth of other Trees is but about an Inch and a quarter, or an Inch and an half in Circumference;

2

which



which shews the Advantage of what I proposed before, of digging and dunging about Trees, and of killing the Weeds about them, which I reckon the greatest Prejudice of any thing to the growth of Trees, in drawing away the heart of the Ground from them: And I am satisfied by several Measures that I have taken of the growth of Trees, that Bushes and Under-wood (though they are by many esteem'd to be as prejudicial as Weeds) are a very great help to the growth of Trees; and the greatest of any, except digging and dunging about them; for they both improve the Land, and keep their Roots moist. But as I find an Account of very great and quick growth of Trees in several Authors, I would desire, that where any such growth of Trees is, that they that are willing to encourage Husbandry, would be pleased to measure the Circumference that they grow in a Year; and likewise to be particular in enquiring into the Nature of the Soil, and likewise into the Depth of that Soil they grow upon, and to communicate it to the Publishers, that I may be able to give an Account what sort of Land it is that is most likely to be so improved by Trees; which will be an Advantage for those to know that have Land of the same kind, and likewise an Encouragement to the Planting and Raising of Timber.

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### Chap. VIII. *Of the Felling of Trees.*

**I** Have already given an Account of the Signs that shew the Unthriftness of a Tree: And therefore when you are resolved to fell any of them, the first thing to be taken care of is a skilful disbranching such Limbs as may endanger them in their Fall, wherein much Fore-cast and Skill is required, many Trees being utterly spoiled for want of this care; and therefore in Arms of Timber that are very great, chop a Nick under them close to the Bole; and so



meeting it with downright Strokes, it will be severed without splitting, as I said before.

2. In felling of Timber, take care to cut them as near the Ground as possible, unless you design to grub them up, which to do is of Advantage both for the Timber and Wood, because they do not reckon the Timber good that grows out of old Stools. The price of Felling of Trees is 12 *d.* per Load, and the same for hewing or squaring, where Men have 14 *d.* a Day.

When your Tree is down, strip off the Bark, and set it so as it may dry well, and be well covered from the wet in case of Rain; and then cleanse the Bole of the Branches that are left, and saw it into Lengths, if you do not sell it to the Timber-buyers to do it for themselves.

*Note,* That Trees that are nine Inches girt about a Yard from the Ground, they commonly reckon Timber Trees, but none under, because such will be about six Inches girt in the girting place when the Bark is off, which will save the labour of climbing of them to measure them.

The common way of dealing with whom, is to sell your Timber as it stands, (which is a very uncertain way) or by the Ton, Load or Foot, forty Foot being reckoned a Ton, and fifty a Load, and in some places just the contrary; therefore 'tis good in all Contracts to mention particularly how many Feet makes a Load or Ton, or else you may have great Contests about it, which Trees you measure either by girt or square Measure. They reckon that forty Foot of round Timber, or fifty Foot of hewn or square Timber weighs the same, that is, twenty Hundred, which is commonly accounted a Cart-load; and as they seldom strip the Bark off of Elm or Ash, they commonly allow one Inch for the Bark, which is a great deal more than it comes to: And therefore if you can strip off the Bark in the measuring-place, which should be always about the middle of the Tree,



it will be better. Some allow four Foot out of every Load for Ash, and five Foot for Oak and Elm: And as for the Computation of the Feet, if it is square Measure, the square is taken by a pair of Cannipers, or two Rulers clapped to the side of the Tree, measuring the distance between them; and if the sides are unequal, they add them together, and take half the Sum, which they account the true side of the square; but if girt Measure, by girting of the middle of the Tree with a Line, and taking a quarter part of that girt for the square, measuring the length from the But-end so far forwards 'till the Tree comes to be six Inches girt, that is, twenty-four Inches in Circumference; and if the Trees have any great Boughs which are Timber, that is, which hold six Inches girt, they measure them by themselves, and add them to the whole: For the casting up the Contents of which, they make use of *Gunter's Line*, upon which, if you extend your Compasses from 12 to the number of Inches contained in the square, and placing one Foot of the Compasses at the length, and keeping of the same extent with your Compasses, if your square is under 12 Inches, turn your Compasses twice towards 12; if above, twice from 12, and it will shew you the Contents: The way of doing which, any one that understands it will shew you in a very little time; which way, though it is a false way of measuring, being near a fifth part short of its true measure, yet it being the common Practice, you must be guided by it. But as many of the Rules are false, and that upon several Occasions and Disputes it may be necessary to try your Measure several ways, I shall first propose the doing of it by common Arithmetick: As, suppose a Tree 40 Inches girt, and 30 Foot long; the 4<sup>th</sup> part of 40 Inches is 10 Inches: Now,

The Rule is as 12 to 10 the square Inches,

So is 30 Foot the length to a fourth Number; and that fourth Number tells you the Contents in Feet.



But to work this the common way, take the fourth part of the Circumference to be the side of the square of the Tree (though erroneous) and measure it as a Cylinder. The fourth part of 40 is 10, which multiplied by it self is 100: And 30 Foot the length multiplied by 12 makes 360, which multiplied by 100, the square of the Tree, gives 36000, the number of square Inches in the Tree: Which Sum divided by 1728, the square Inches that are in a solid Foot, gives 20 Feet, and about three fourths, and odd Fractions, being no ways material in Timber-measure.

10
10
<u>1</u>
100
<u>1</u>
30
12
<u>60</u>
30
<u>1</u>
360
<u>1</u>
360
<u>1</u>
100
36000

14
12840
36000 (20 $\frac{1440}{1728}$
17288
172

Now to try this by the following Table, look for 10 Inches in the Left-hand Column, and for 30 Foot at the top, which is the length, and you will find 20 Foot, and (82 parts of a Hundred, which is about) three fourths of a Foot.

The following Table of girt and square Measure, Numb. 1. is what you may see the Contents of any piece of Timber by, according to the common way of measuring Timber, from half an Inch square to 36 Inches, and in length from 1 Foot to 30.

#### EXAMPLE.

Suppose a Tree, the Circumference of which is 136 Inches as girt by the Line, which doubled four times makes the square or quarter part 34 Inches: Which Number look for in the first Column of the following Table, and supposing the length of the Piece to be 9 Foot, in the Column under 9, against 34 Inches, you will find 72: 25, which is 72 Feet, and 25 of the hundred Parts of a Foot, which makes 72 Feet and a quarter; which is the Contents of a piece of Timber of that Dimension.

A



A. Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

In.	1	2	3	4	5	6
	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.
1	0 00	0 00	0 00	0 01	0 01	0 01
	0 01	0 01	0 02	0 03	0 03	0 04
	0 01	0 03	0 05	0 06	0 08	0 09
2	0 03	0 05	0 08	0 11	0 14	0 17
	0 04	0 08	0 13	0 17	0 21	0 26
3	0 06	0 12	0 18	0 25	0 31	0 37
	0 08	0 17	0 25	0 34	0 42	0 51
4	0 11	0 22	0 33	0 44	0 55	0 66
	0 14	0 28	0 42	0 56	0 70	0 84
5	0 17	0 35	0 52	0 69	0 81	1 04
	0 21	0 42	0 63	0 84	1 05	1 26
6	0 25	0 50	0 75	1 00	1 25	1 50
	0 29	0 58	0 88	1 17	1 46	1 76
7	0 34	0 68	1 02	1 36	1 70	2 04
	0 39	0 78	1 17	1 56	1 95	2 34
8	0 44	0 89	1 33	1 77	2 22	2 66
	0 50	1 00	1 50	2 01	2 51	3 01
9	0 56	1 12	1 68	2 25	2 81	3 37
	0 63	1 25	1 88	2 51	3 13	3 76
10	0 69	1 39	2 08	2 87	3 47	4 16
	0 76	1 53	2 29	3 06	3 82	4 59
11	0 84	1 68	2 52	3 36	4 20	5 04
	0 92	1 84	2 76	3 67	4 59	5 51
12	1 00	2 00	3 00	4 00	5 00	6 00

The Square of Timber in Inches and half Inches.



## A Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

The Square of Timber in Inches and half Inches.

In.	1	7	1	8	1	9	1	10	1	20	1	30
	Ft. Pt.		Ft. Pt.		Ft. Pt.		Ft. Pt.		Ft. Pt.		Ft. Pt.	
1	0	01	0	01	0	02	0	02	0	04	0	06
	0	05	0	05	0	06	0	07	0	14	0	21
	0	11	0	13	0	15	0	16	0	32	0	48
2	0	19	0	22	0	25	0	28	0	56	0	84
	0	30	0	34	0	39	0	43	0	86	1	29
3	0	43	0	49	0	56	0	62	1	24	1	86
4	0	59	0	68	0	76	0	85	1	70	2	55
	0	78	0	89	0	99	1	11	2	22	3	33
	0	98	1	12	1	26	1	40	2	80	4	20
5	1	22	1	39	1	56	1	74	3	48	5	22
	1	47	1	68	1	89	2	10	4	20	6	30
6	1	55	2	00	2	25	2	50	5	00	7	50
7	2	05	2	34	2	64	2	93	5	86	8	79
	2	38	2	72	3	06	3	40	6	80	10	20
	2	73	3	12	3	51	3	90	7	80	11	70
8	3	11	3	55	3	99	4	44	8	88	13	32
	3	51	4	01	4	52	5	02	10	04	15	06
9	3	93	4	49	5	06	5	62	11	24	16	86
10	4	29	5	01	5	64	6	27	12	54	18	81
	4	86	5	55	6	24	6	94	13	88	20	82
	5	35	6	12	6	88	7	65	15	30	22	95
11	5	88	6	72	7	56	8	40	16	80	25	20
	6	43	7	35	8	27	9	19	18	38	27	57
12	7	00	8	00	9	00	10	00	20	00	30	00



A Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

In. | 1 | 2 | 3 | 4 | 5 | 6

Ft. Pt. | Ft. Pt. | Ft. Pt. | Ft. Pt. | Ft. Pt. | Ft. Pt.

13	1	08	2	17	3	25	4	34	5	42	6	51
	1	17	2	35	3	51	4	69	5	87	7	04
	1	26	2	53	3	80	5	06	6	33	7	59
14	1	36	2	72	4	08	5	44	6	80	8	16
	1	46	2	92	4	38	5	80	7	30	8	76
15	1	55	3	12	4	68	6	25	7	81	9	37

16	1	67	3	33	5	00	6	67	8	34	10	01
	1	78	3	55	5	33	7	11	8	89	10	67
	1	89	3	78	5	67	7	56	9	45	11	34
17	2	1	4	01	6	02	8	03	10	03	12	04
	2	13	4	25	6	38	8	51	10	63	12	76
18	2	25	4	50	6	25	9	00	11	25	13	50

19	2	38	4	75	7	13	9	51	11	88	14	26
	2	51	5	01	7	52	10	03	12	53	15	04
	2	64	5	28	7	82	10	56	13	20	15	64
20	2	78	5	55	8	33	11	11	13	89	16	67
	2	92	5	83	8	75	11	67	14	59	17	51
21	3	06	6	12	9	18	12	25	15	31	18	37

22	3	11	6	42	9	63	12	84	16	05	19	26
	3	36	6	72	10	08	13	44	16	80	20	16
	3	51	7	03	10	55	14	06	17	58	21	09
23	3	67	7	34	11	02	14	69	18	36	22	04
	3	83	7	67	11	50	15	34	19	17	23	01
24	4	00	8	00	12	00	16	00	20	00	24	00

The Square of Timber in Inches and half Inches.



## A Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

The Square of Timber in Inches and half Inches.

In.	1	7	1	8	1	9	1	10	1	20	1	30
	Ft.	Pt.	Ft.	Pt.	Ft.	Pt.	Ft.	Pt.	Ft.	Pt.	Ft.	Pt.
13	7	51	8	68	9	76	10	85	21	70	32	55
	8	22	9	39	10	56	11	87	23	48	35	22
	8	86	10	13	11	39	12	66	25	32	37	98
14	9	53	10	89	12	25	13	61	27	22	40	83
	10	22	11	68	13	14	14	60	29	20	43	80
15	10	93	12	49	14	06	15	62	31	24	46	86
	11	67	13	34	15	01	16	68	33	36	50	04
16	12	44	14	22	16	00	17	78	35	56	53	34
	13	24	15	13	17	02	18	91	39	82	58	73
17	14	05	16	05	18	06	20	07	40	14	60	21
	14	89	17	01	19	14	21	27	42	54	63	81
18	15	75	18	10	20	25	22	50	45	00	67	50
	16	64	19	01	21	39	23	77	47	54	71	31
19	17	55	20	05	22	56	25	07	50	14	75	21
	18	49	21	13	23	77	26	41	52	82	79	23
20	19	40	22	22	25	00	27	78	55	56	83	34
	20	42	23	34	26	26	29	18	58	36	87	54
21	21	43	24	49	27	56	30	62	61	24	91	86
	22	47	25	68	28	85	32	10	64	20	96	30
22	23	53	26	89	30	25	33	61	67	22	100	83
	24	61	28	13	31	64	35	16	70	32	105	48
23	25	77	29	38	33	06	36	73	73	46	110	19
	26	84	30	68	34	51	38	35	76	70	115	05
24	28	00	32	00	36	00	40	00	80	00	120	00



A Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

The Square of Timber in Inches and half Inches.

In.	1	2	3	4	5	6
	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.
25	4 16	8 33	12 50	16 66	20 83	24 99
	4 34	8 68	13 02	17 36	21 70	26 04
	4 51	9 02	13 54	18 05	22 56	27 08
26	4 69	9 39	14 08	18 77	23 47	28 16
	4 88	9 75	14 63	19 51	24 38	29 26
27	5 06	10 12	15 19	20 25	25 31	30 38
28	5 25	10 50	15 75	21 00	26 85	31 50
	5 44	10 89	16 33	21 78	27 22	32 67
	5 67	11 34	17 01	22 68	28 35	34 02
29	5 84	11 68	17 52	23 36	29 20	35 04
	6 04	12 08	18 13	24 17	30 21	36 26
30	6 25	12 50	18 75	25 00	31 25	37 50
31	6 46	13 91	19 38	25 84	32 30	38 76
	6 67	13 34	20 02	26 69	33 36	40 04
	6 89	13 78	20 67	27 56	34 45	41 34
32	7 11	14 22	21 33	28 44	35 55	42 66
	7 33	14 66	21 99	29 33	36 66	43 99
33	7 56	15 12	22 68	30 24	37 81	45 37
34	7 78	15 56	23 34	31 12	38 90	46 68
	8 03	16 05	24 08	32 11	40 14	48 17
	8 26	16 52	24 79	33 05	41 34	49 58
35	8 54	17 01	25 52	34 03	42 53	51 04
	8 70	17 50	26 25	35 00	43 75	52 50
36	9 00	18 00	27 00	36 00	45 00	54 00



## A Table of Girt and Square Meas. N. 1.

The Length of the Timber in Feet.

The Square of Timber in Inches and half Inches.

In.	7	8	9	10	20	30
	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.	Ft. Pt.
25	29 16	33 33	37 49	41 66	83 32	124 98
	30 38	34 72	39 06	43 40	86 80	130 20
	31 59	36 10	40 62	45 13	90 26	135 39
26	32 86	37 55	42 24	46 94	93 88	140 82
	34 14	39 01	43 89	48 77	97 54	146 31
27	35 44	40 50	45 57	50 63	101 26	151 89
28	36 75	42 00	47 25	52 50	105 00	157 50
	38 11	43 56	49 00	54 45	109 35	164 35
	39 69	45 36	51 03	56 70	113 40	170 10
29	40 88	46 88	52 56	58 40	116 80	175 20
	42 30	48 34	54 39	60 43	120 86	181 29
30	43 75	50 00	56 25	62 50	125 00	187 00
31	45 22	51 68	58 14	64 60	129 20	193 80
	46 71	53 36	60 06	66 50	133 00	199 00
	48 23	55 12	62 01	68 40	136 80	204 20
32	49 78	56 89	63 99	71 11	142 22	213 33
	51 33	58 66	65 99	73 33	146 66	219 99
33	52 93	60 49	68 06	75 62	151 24	226 86
34	54 46	62 24	70 02	78 80	157 60	236 40
	56 19	64 22	72 25	80 28	160 36	240 54
	57 84	66 10	74 37	82 63	165 26	247 89
35	59 55	68 05	76 56	85 07	170 14	255 21
	61 25	70 00	78 75	87 50	175 00	262 50
36	63 00	72 00	81 00	90 00	180 00	270 00



Numb. 2.

Ft.	In.	Ft.	In.	Pts.
0	6	4	0	0
	7	2	11	2
	8	2	3	0
	9	1	9	3
	10	1	3	3
	11	1	2	3
I.	0	1	0	0
	1		10	2
	2		8	8
	3		7	6
	4		6	7
	5		5	9
	6		5	3
	7		4	8
	8		4	3
	9		3	9
	10		3	5
	11		3	3
II.	0		3	0
	1		2	8
	2		2	6
	3		2	3
	4		2	2
	5		2	1
	6		1	9
	7		1	8
	8		1	7
	9		1	6
	10		1	5
	11		1	4
III.			1	3

This Table, *Numb. 2.* is to shew how much in length will make a solid Foot of any Tree, whose quarter-part of the Circumference is from 6 Inches to 36 Inches.

### EXAMPLE.

Suppose a Tree of 60 Inches in Circumference, the fourth part of which is 15 Inches, or 1 Foot 3 Inches; which if you look for in the first Column, opposite to it in the second Column you will find 7 Inches and 6 tenth parts of an Inch (which is somewhat above half an Inch) and so much in length will make one Foot square.

By



By this Table suppose a Plank or Board 9 Inches broad, to find how much in length will make one Foot.

First find out 9 Inches in the first Column, opposite to it in the second Column you will find 140 which is one Foot four Inches, so much in length of a Plank or Board 9 Inches broad going to make up a Foot: So that every 16 Inches in length is a Foot of Plank; and consequently, every 8 Inches half a Foot, every 4 Inches a quarter, &c. Thus again, If a Board hold 2 Foot and 3 Inches in breadth, 5 Inches and 3 tenth parts of an Inch in length will make a square superficial Foot of Plank, &c.

Numb. 5.				
A Table to measure Plank, Boards, &c.				
Ft.	In.	Ft.	In.	Pt.
	1	12	0	0
	2	6	0	0
	3	4	0	0
	4	3	0	0
	5	2	4	8
	6	2	0	0
	7	1	8	6
	8	1	6	0
	9	1	4	0
	10	1	2	4
	11	1	1	1
I.	0	1	0	0
	1	0	11	8
	2	0	10	3
	3	0	9	6
	4	0	9	0
	5	0	8	5
	6	0	8	0
	7	0	7	6
	8	0	7	2
	9	0	6	8
	10	0	6	5
	11	0	6	2
II.	0	0	6	0
	1	0	5	8
	2	0	5	5
	3	0	5	3
	4	0	5	1
	5	0	5	0
	6	0	4	8
	7	0	4	7
	8	0	4	5
	9	0	4	4
	10	0	4	2
	11	0	4	1
III.	0	0	4	0



Numb. 4.

A Table of Square Measure.

In.	Ft.	In.	Pt.
1	144	0	0
2	36	0	0
3	16	0	0
4	9	0	0
5	5	9	1
6	4	0	0
7	2	11	2
8	2	3	0
9	1	9	3
10	1	5	2
11	1	2	2
12	1	0	0
13		10	2
14		8	8
15		7	6
16		6	7
17		5	9
18		5	3
19		4	7
20		4	3
21		3	9
22		3	5
23		3	2
24		3	0
25		2	7
26		2	5
27		2	3
28		2	2
29		2	0
30		1	9

This Table of Square Measure shews how much goes to make a solid Foot of any piece of Timber, from 1 Inch to 30 Inches square.

EXAMPLE.

I would know how long a piece of Timber of 10 Inches square ought to be to contain a Foot of Timber? Look for 10 in the Left-hand Column, opposite to which you'll find 1 Foot 5 Inches and 2 tenths of an Inch ; which is the length that makes a solid Foot.



This Table of Round Measureshews how much in length makes a solid Foot of Timber in any round piece whose Diameter is from one Inch to 30 Inches over.

Numb. 5.

### EXAMPLE.

I would know how much an exact round piece of Timber, containing but one Inch in Diameter, must be in length to make a solid Foot of Timber? Look in the first Column for one Inch, and opposite to it you will find 113 Foot, 1 Inch and 7 tenth Parts of an Inch; which is the Contents sought for.

A Table of Round Measure.

In.	Ft.	In.	Pt.
1	113	1	7
2	28	3	4
3	12	6	8
4	7	0	8
5	4	6	3
6	3	1	7
7	2	3	7
8	1	9	2
9	1	4	7
10	1	1	5
11		11	2
12		9	4
13		8	4
14		6	9
15		6	0
16		5	3
17		4	6
18		4	1
19		3	7
20		3	3
21		3	1
22		2	8
23		2	5
24		2	3
25		2	1
26		2	0
27		1	8
28		1	7
29		1	6
30		1	5



If you have a mind to know the Value of a Tree standing, you may girt it, and allowing for the Bark, and so much as you think it will measure less in the girting place than at the Butt, and taking of the heighth of it, compare it with the foregoing Tables, and you may the better guess at its Worth, because you have a Rule to go by. Now for the taking of the heighth of a Tree, the best way is with a Quadrant, which the larger 'tis, the more exact you may be in doing of it; which is done after this manner: Hold your Quadrant so as that your Plummet may fall on 45 Degrees, and go to such a distance from the Tree as you may, through the Sights of your Quadrant, see the top of it; and measure from the place of your standing to the Foot of the Tree, adding to it the heighth of your Eye from the Ground, and it will give you the heighth desired: Or if you stand where the Plummet may fall on 22 Degrees and 30 Minutes, it will be half the heighth; or 67 Degrees and 30 Minutes will be the heighth and half the heighth.

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Chap. IX. *Of Grubbing up of Woods and Trees.*

**T**HE grubbing up of Woods and Trees may be needful upon the Account of their Unthriftness, or to plant better Lands for that purpose, and to grub up Roots that are decayed to make room for them that are more thriving, &c. which, though a chargeable Work, yet it may much be lessened by a particular Engine, which I thought it might be of Advantage to make more Publick. It is a very cheap Instrument, only made use of in some particular Places, and will ease about a third part of the charge of this sort of Labour; it is an Iron-hook of about





two Foot four Inches long, with a large Iron-ring to it, the shape of which you have in the Figure, and may be made for about 3 s. 6 d. charge, which they use after this manner. Where a Stub of Under-wood grows, they clear the Earth round it, where they think any side Roots come from it, and cut them; which when they have done, in any Hole on the sides of the Root they enter the Point of the Hook, and putting a long Leaver into the Ring, two Men at the end of it go round 'till they wring the Root out, twisting the tap Roots asunder, the difficulty of coming at which often occasions the greatest Labour of this Work. Stubs also of Trees may be taken up with it; in which Work it saves a great deal of Labour, though not so much as in the other, because the Stubs must be first cleft with Wedges before you can enter the Hook in the sides of it to wrench it out by pieces.

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### Chap. X. *Of Seasoning of Timber.*

**T**imber being felled and sawn, is next to be seasoned: For doing of which, some advise that it be laid up very dry in an airy place, yet out of the Wind or Sun; others say, it ought to be free from the Extremities of the Sun, Wind, and Rain: And that it may not cleave, but dry equally, you may dawb it over with Cow-dung. Let it not stand upright, but lay it along, one piece upon another, interposing some short Blocks between them to preserve them from a certain Mouldiness which they usually contract when they sweat, and which frequently produces a kind of *Fungus*, especially if there be any sappy Parts remaining.

Others



Others advise to lay Boards, Planks, &c. in some Pool or running Stream; or, which is better, in Salt-water for a few Days, to extract the Sap from them, and afterwards to dry them in the Sun or Air; for by so doing, (say they) they will neither chap, cast, nor cleave: Mr. *Evelyn*, particularly, commends this way of Seasoning of Fir, but against Shrinking there is no Remedy.

Some again commend Buryings in the Earth, others in Wheat; and there be Seasonings of the Fire, as for the scorching and hardening of Piles which are to stand either in the Water or the Earth.

Sir *Hugh Plat* informs us, that the *Venetians* use to burn and scorch their Timber in the flaming Fire, continually turning it round with an Engine 'till they have gotten upon it a hard black coaly Crust; and the Secret carries with it great Probability, for that the Wood is brought by it to such a hardness and driness, that neither Earth nor Water can penetrate it. “I my self (says Mr. *Evelyn*) remember to have  
“seen Charcoal dug out of the Ground, amongst the  
“Ruins of ancient Buildings, which have in all pro-  
“bability lain covered with Earth above 1500 Years.

For Posts and the like that stand in the Ground, the burning the Out-sides of those Ends that are to stand in the Ground, to a Coal, is a great Preservative of them. Sir *Hugh Plat* adds, “That a *Kentish*  
“Knight of his Acquaintance did use to burn (in this  
“manner) the Ends of the Posts for Railing or Pail-  
“ing.” And this was likewise practised with good Success by a *Sussex* Gentleman, *Walter Burrell* of *Cuckfield*, Esq;

This burning of the ends of Posts is practised in *Germany*, as appears by the Abstract of a Letter written by *David Vonderbeck*, a German Philosopher and Physician at *Minden*, to Dr. *Largelott*, registred in the *Philosophical Transactions*, Numb. 92. Pag. 1585. in these Words: “Hence also they slightly burn the



“ ends of Timber to be set in the Ground, that so  
 “ by the Fusion made by Fire the Volatile Salts  
 “ (which by accession of the Moisture of the Earth  
 “ would easily be consumed to the Corruption of the  
 “ Timber) may catch and fix one another.

### Chap. XI. *Of Preserving of Timber.*

**W**HEN Timber or Boards are well seasoned or dried in the Sun or Air, and fixed in their places, and what Labour you intend is bestowed upon them; the use of Linseed Oil, Tar, or such Oleaginous Matter, tends much to their Preservation and Duration. *Hesiod* prescribes to hang your Instruments in Smoak to make them strong and lasting: Surely, then the Oil of Smoak (or the Vegetable Oil, by some other means obtained) must needs be effectual in the Preservation of Timber also. *Virgil* advises the same.

The Practice of the *Hollanders* is worth our Notice; who, for the Preservation of their Gates, Portcullis, Draw-bridges, Sluices, and other Timbers exposed to the perpetual Injuries of the Weather, coat them over with a mixture of Pitch and Tar, upon which they strew Cockle and other Shells, beaten almost to Powder, and mingled with Sea-sand, which incrusts and arms it after an incredible manner against all the Assaults of Wind and Weather.

When Timber is felled before the Sap is perfectly at rest (says Mr. *Evelyn*) it is very subject to the Worm: And to prevent and cure this in Timber, I recommend the following Secret as most approved.

Let common yellow Sulphur be put into a Cucurbit-glass, upon which pour so much of the strongest *Aqua fortis* as may cover it three Fingers deep. Distil this to Driness, which is done by two or three Rectifications: Let the Sulphur remaining at the bottom (being of a blackish or sad red Colour) be laid  
 on



on a Marble, or put into a Glass, where it will easily dissolve into Oil. With this anoint what Timber is either infected with Worms, or to be preserved from them. It is a great and excellent *Arcanum* for tinging the Wood, of no unpleasant Colour, by no Art to be washed out, and such a Preservative of all manner of Woods, nay, of many other things also, as Ropes, Cables, Fishing-nets, Masts, or Ships, &c. that it defends them from Putrefaction either in Waters, or above the Earth, in Snow, Ice, Air, Winter, or Summer, &c. I am told, that Oil of Spike will kill the Worm in any Wood.

It were superfluous to describe the Process of making the *Aqua fortis*; it shall suffice to let you know, that our common *Coperas* makes this *Aqua fortis* well enough for our purpose, being drawn over by a Retort: And for Sulphur, the Island of St. *Christopher's* yields enough (which hardly needs any refining) to furnish the whole World. This Secret (for the curious) I thought not fit to omit, though a more compendious way may serve the turn. Three or four Anointings with Linseed Oil has proved very effectual. It was experimented in a Walnut-tree Table, where it destroyed Millions of Worms immediately, and is to be practised for Tables, Tubes, mathematical Instruments, Boxes, Bedsteads, Chairs, &c. Oil of Walnuts will doubtless do the same, and is a sweeter and better Varnish. But Oil of Cedar, or that of Juniper, is commended above all.



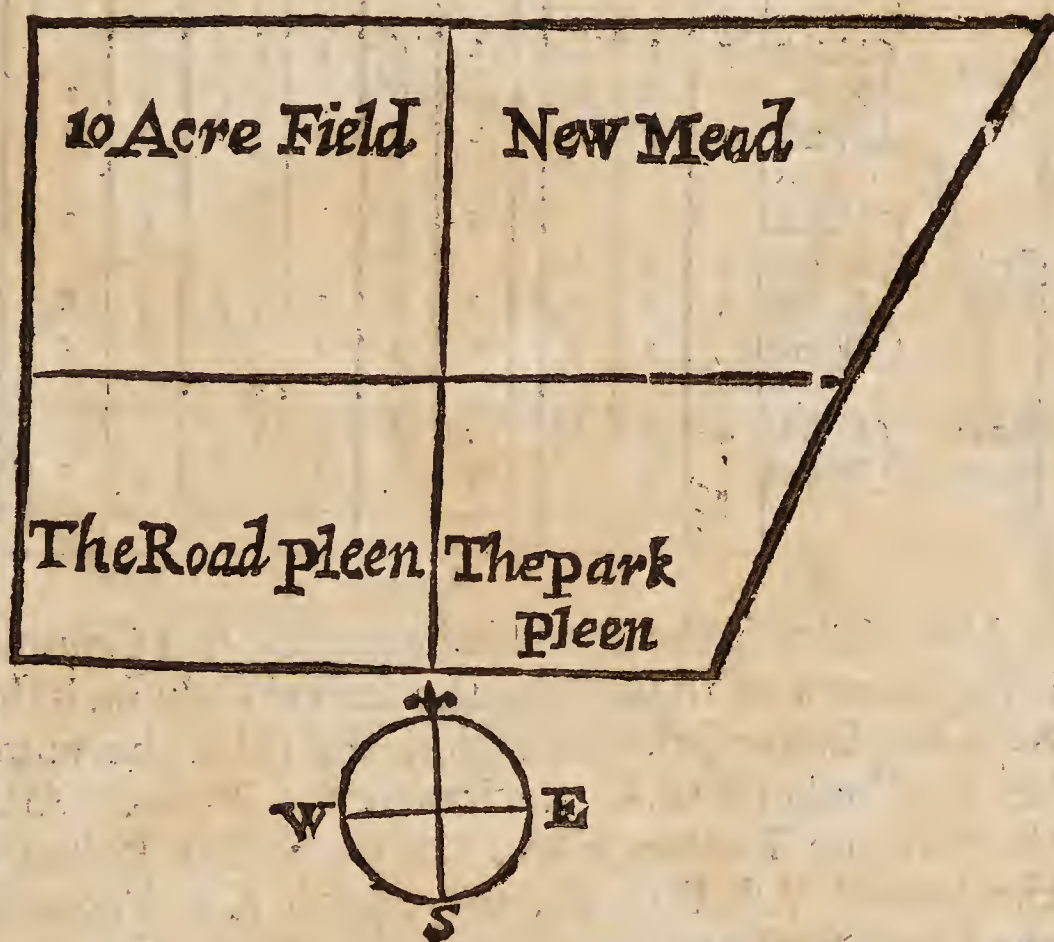
Chap. XII. *Of closing Chops and Clefts in green Timber.*

**G**REEN Timber is very apt to split and cleave after it is wrought into Form, which in fine Buildings is a great Eye-sore : But to close the Chops and Clefts I find this Expedient to do well ; which is to anoint and supple it with the Fat of Powder'd-beef Broth, with which it must be well soaked, and the Chasm filled with Sponge dipped in it : This to be done twice over. Some Carpenters make use of Grease and Saw-dust mingled ; but the first is so good a way (says my Author) that I have seen Wind-shock Timber so exquisitely closed, as not to be discerned where the Defects were. This must be used when the Timber is green.

I shall conclude this Treatise of Forest-trees with considering, and in some measure proposing of Remedies for two of the greatest Discouragements that belong to the Planting and Raising of them : The one is, the long time that the Owners are forced to wait for the growth of their Timber before they can make any Profit of it ; and the other is, the Timber's being liable to so many Abuses and Cheats from Tenants, Bailiffs, Executors, and others, in case of the Owner's Negligence or Death ; especially if they are forced to leave their Wood to a young Heir. Now as to the first Objection, if the Timber is thriving there is no Stock you can have Money in that will turn to better Account, though you stay long for it ; nor any thing that it can be better secured in, which I think will make amends for the Stay. And as for the second Objection, which I think the most material, and the greatest Inconveniency and Discouragement to Planting and raising of Timber of any ; if I can propose a Method for the taking an exact Account of the Timber-trees, both in Hedges and Woods,



Woods, I shall wholly answer that Objection and Inconveniency too: For the doing of which, first, in Hedge-rows you may observe this Method. Suppose the four Fields underneath to be what you have a mind to take an Account of, which are called by the Names of, *The Ten Acre Field*, *The New Mead*, *The Road Pleen*, and *Park Pleen*, and lying as in the following Map.



Make a Scheme after the following manner.

Names



Names of the Fields.	Side of the Fields.	Timber Trees			Pollard s.			Saplings, or young Trees.		
		Oak	Ash	Elm	Oak	Ash	Elm	Oak	Ash	Elm
10 Acre Field.	N. fide	10	3	4	6	10	4	10	5	4
	E. end	5	4	6	3	6	3		2	3
	S. fide		5	4		2		1	3	4
	W. end	4		3	8			6	5	4
New Mead.	N. fide	5	3		2	6	5	4		
	E. end		3	4		0		5	4	2
	S. fide	3	5	2	2	3	4	6	7	8
Park Pleen.	N. fide				5	6		7	5	2
	E. end	4	3	2		0				
	S. fide	3	4	2	3	2	2	5	5	6
	W. end		5	4	2	3	2	4	6	5
Road Pleen	S. fide	4	3	2		1	2			
	W. end				5	6	7	8	4	2

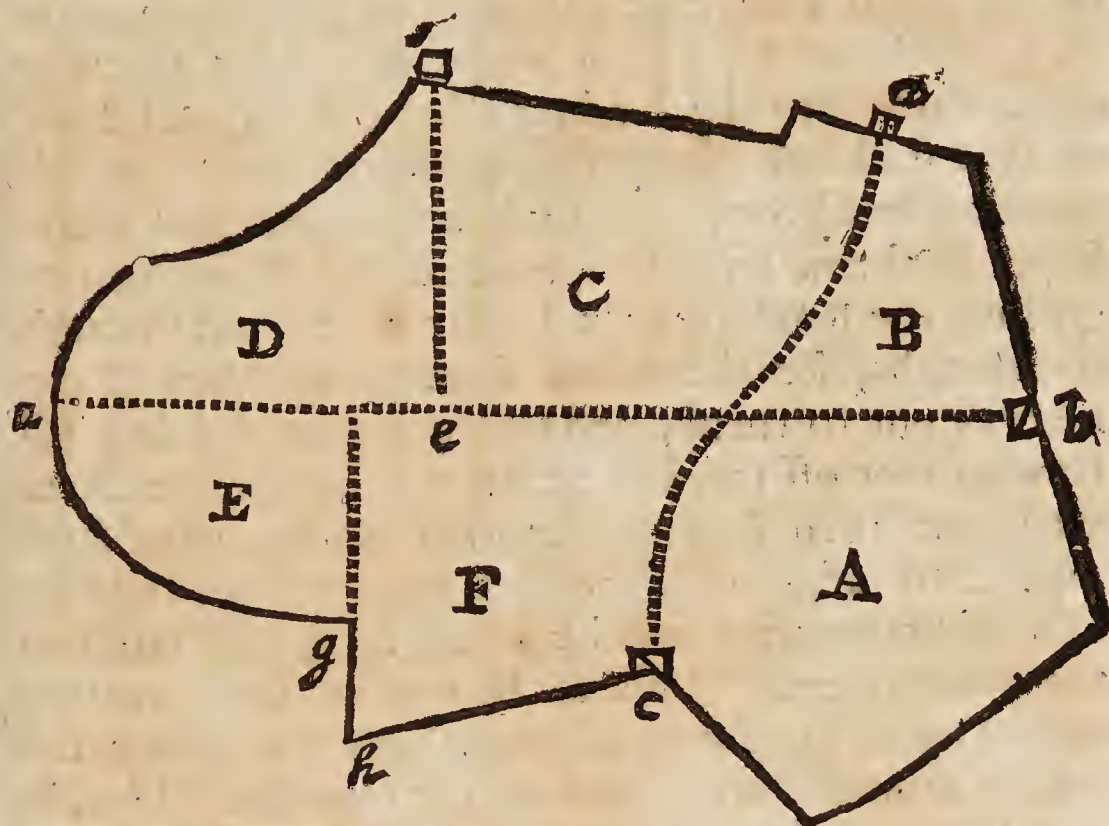
*Note,* That in the above Scheme, the first Column is the Names of the Fields, the second Column is the Sides and Ends of the said Fields, the third the number of Timber Oaks, the fourth the Timber Ash, the fifth the Timber Elms, the sixth Oak Pollards, the seventh Ash Pollards, the eighth Elm Pollards, the ninth Sapling or young Oaks, the tenth young Ash, the eleventh young Elms; and the twelfth Column is to add other sorts of Trees in, or to set down when they are felled.

Only 'tis to be observed, that to the *New Mead* Field is reckoned but two Sides and only the East end, because the Ditch being on the *New Mead* side, the Hedge row between that and the *Ten Acre* Field, is reckoned to the ten Acres; and though the Hedge-row between the *New Mead* Field and the *Park Pleen* is reckoned to both, 'tis because there are Trees on the Dools belonging to the *Park Pleen*, and not what Trees are in the Hedge-rows.

For



For taking an Account of the Number of Trees in Woods, where they are long and narrow 'tis easily done when they are felled; but where Woods are large, 'tis more difficult: I shall therefore propose to you the Method I took for the doing of it in a Wood I have that contains about 40 Acres. A Draught of which you have as follows.



Which Wood being too large to fell at once (I not having Woods enough to answer such a Fall every Year) and finding my Wood cut in Patches, and other parts of it scambled and cut before it was at its Growth; that they might come at what was fit to cut, I resolved to cut a Cart-way through the middle of it, by which means I proposed three Advantages; First, to cut what part of my Wood I would, and to have a clear Cart-way to carry off both my Wood and Timber, which saved my Standers and Wood too very much. Secondly, To divide my Wood into two Parts, in order to the counting of my Standards; and



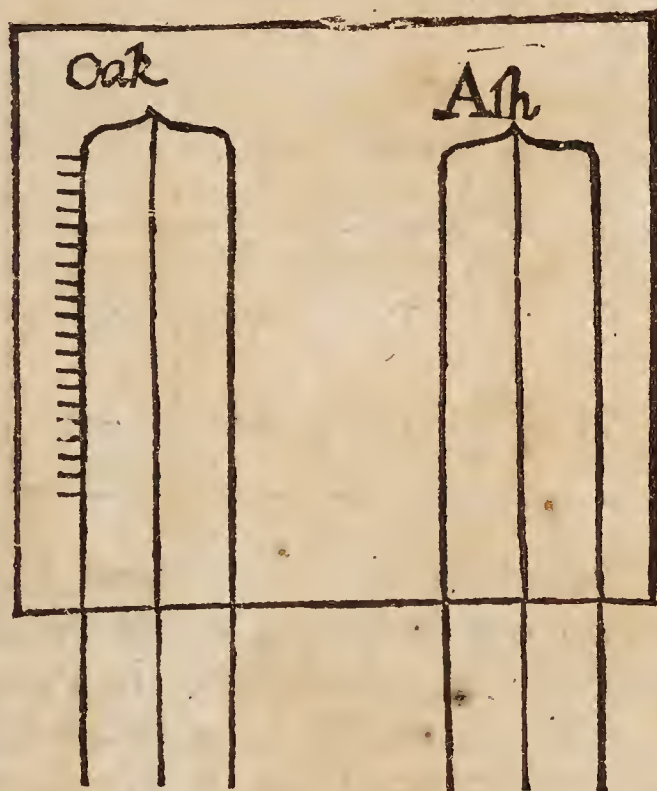
and Thirdly, It being near my House to have a fine Walk of it: which Cart-path in the Map is marked with a pricked Line from *a* to *b*. But, I suppose, I shall be asked how, in a standing Wood, I could carry the Path so straight, and keep the middle of the Wood from one end to the other? For the doing of which, the Method I took was this: I drew on the Map the Line *ab*, and taking of the Angle on the Map at *a*, I set my plain Table to that Angle, and by my Sight I directed a Workman to cut a narrow Path of about two Foot wide, and about seven or eight Yards into the standing Wood, and then I stuck up two sticks of equal Height, on the top of which I made a small Slit, and stuck a small piece of white Paper in them, and then ordered the Workman to go into the standing Wood as far as he could through the Boughs, see the white Papers, and then to cut his way out to them; and this he repeated doing 'till he was so far off the first Stakes as not to discern them well, and then I set up another Stake in the same manner to range with the first, and continued adding of one Stake after another, 'till he got through to the Wood's end: This is the way of their cutting their Glades in *Hertfordshire*, which hit as near the middle as you see it laid down in the Draught: This, as I said before, divided my Wood into two Parts; and from the Gate at *c* to the Stile at *d* was a Foot-path, which I marked likewise with a pricked Line, which made in the Wood the two Divisions of *A* and *B*. And having some Woods adjoining to this Wood at *f*, I was oblig'd to make another Cart-way from *e* to *f*, which made the Divisions of *C* and *D*: And from the Foot-path *cd*, being too large a Division, to lessen it I made several small Hills, in which I stuck Stakes to run parallel with the corner of the Wood *gb*; which made the Divisions *E* and *F*. By which means I divided my Wood into six Parts, which afforded me a part to fell every Year, and gave me an

oppor-



opportunity of counting the Trees in each Division as I felled them, which I did after this manner.

My Wood consisting only of Oak and Ash, I divided my Trees into three sorts, *viz.* first Storers, which I reckoned all to be that were under 12 Inches Circumference; secondly, Saplings, which I called all under 24 Inches Circumference; and what was two Foot Circumference, or above a Yard from the Ground, I reckoned Timber-trees: And taking of a



Slate, I drew six Lines after this manner; and taking of one with me with a Paper ruled after the same manner, and a piece of Chalk, a black Lead Pencil, and a Line with two Knots in it, one of 12 Inches long, and the other of 24 Inches: Those Trees that we were not certain

of being under the Measure mentioned we measured, and as we counted the Trees we drew a Chalk-line about them, which shewed us which we told, that we might not tell them again: And as we told them I scored on the first Line the Oak Storers, on the second Line the Saplings, and on the third Line the Timber Oaks, observing the same Method with the Ash; and when I had scored twenty on any of the Lines, I rubbed out my Scores on the Slate, and with my Pencil I scored one on the Paper for one Score. And the Divisions of *A* and *B* being all the Wood that was felled at present, when I came home I found my Account of those two Divisions as follows, which I set down



# *The Art of Husbandry: Or,*

down in the following Method; that I think will be Direction enough for this or any other Woods that you shall have occasion to take an Account of.

*An Account of the Number of Trees in the several Divisions of my Wood, called The Great Wood, taken in the Year 1705.*

	O A K S.			A S H.		
N <sup>o</sup>	Storers	Saplin	Timber	Storers	Saplin	Timber
A.	150	110	50	50	40	60
B.	50	60	55	150	45	40

And though this Exactness may seem more nice than is necessary, yet no one knowing whose Hand he may fall into, it may be of Advantage, the Pains being very little, especially since I have my self, with only one to help me, taken an Account of three Acres of Wood Land in an Hours time, where the Standards have been very thick, which I think no very tedious Business; but I shall leave every one to do as they see most convenient, and proceed to give some Account of the *Kitchen-Garden*.





B O O K XIII.



Chap. I. *Of such Herbs, Roots, and Fruits, as are usually planted in the Kitchen-Garden, or Olitory.*



Have already shewed the Husbandman how to order his Pasture, Arable, and Wood Land; and what I have now to treat of, is the *Kitchen-Garden* and the *Orchard*, which are parts of Husbandry of no small Advantage to the industrious Farmer; and for the quantity of Ground that the *Kitchen-Garden* takes up, there is no part of his Land that will turn to better Advantage than what is improved this way, it being a great deal of Meat and Corn that is saved by Beans, Peas, and Roots; and likewise a great deal of Barley, where is plenty of Cyder, besides the Advantage that Fruit brings by what may be sold to neighbouring Towns, and the Cyder that might come to be exported to Foreign Parts, if we could attain to a true Perfection in the Art of making this profitable Liquor; but of these things hereafter. I shall at present only give Directions for the *Kitchen-Garden*; in first shewing what is the best Situation and Figure for a *Kitchen-Garden*: Secondly how to order the Ground-Beds, &c. for this

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this use, that being the Foundation of the Work. And thirdly, Give a Catalogue of such useful Herbs, Roots and Fruits (as are therein to be cultivated) in an Alphabetical manner; which I think will be the readiest way to find any particular sorts of Garden Commodities that shall be desired, and will be much better than the ranking of them under the several Kinds or Species. And therefore,

*Situation.*

First, As to the Situation of the *Kitchen-Gardens*, small Valleys or low Grounds are best, because commonly such Places have a good depth of Earth, and are fatned by the neighbouring Hills, especially if they are not exposed to Inundations, and afford good Water; but as for Fruit-Trees, a Ground moderately dry (provided the Soil be rich and deep) is the best; and for the Position, if the Earth be strong, and consequently cold, the South Aspect is the best; but if it be light and hot, the East is to be preferr'd. The Southern Aspects are often exposed to great Winds from the middle of *August* to the middle of *October*; the Eastern is subject to the North-East Winds, which withers the Leaves and new Shoots, especially of Peach Trees; and the Western to the North West Winds, which brings Blites in Spring, and strong Gales in Autumn, which commonly shakes off the Fruit before it is ripe: But as all Positions have their Perfections and Imperfections, care must be taken to make what Advantage we can of the first, and to use our best Skill to defend our selves from the last.

*Figure.*

The best Figure for a *Kitchen-Garden*, and most convenient for Culture, is a Square of strait Angles, being once and a half or twice as long as broad; for in Squares the most uniform Beds may be made; the Walls ought also to be well furnished with Fruit-Trees, to be of a good heighth, and placed so as to afford good shelter on all sides; the Beds, Plats and Borders to be set with all sorts of things necessary for all Seasons of the Year, and to have the Walks clean, of a proportionable largeness, and to afford as much variety as the place will admit of. Secondly,



Secondly, For the way of managing and ordering *Land to order.* of Land for this Purpose; as in all other sorts of Husbandry, so in this you are to consider the nature of the Soil, and what is most proper and best to make an addition to its Goodness; of which Particulars I have treated already, only it is to be noted, that as your *Kitchen Garden* is to afford great variety of Plants, Roots, Herbs, &c. your Soil must be made more rich than for Corn, most Garden things requiring a richer Soil, if you design to have them prosper well; if you meet with Ground that is naturally good and moist (which is the best for Garden-ground) it is a great Advantage, and much lessens the Expence; but Land is very rarely found that doth not require a great deal of Labour, tho' it may not want Manure; for many times the Surface of the Earth shall be good, which (being opened a Spit deep) will be found to afford only a cold Clay bottom; which is a much more pernicious Soil for Trees and Garden-ware than Gravel it self, because in Gravel, especially if any thing inclined to Springs, the Roots of Trees, &c. often meet with some small Veins, whence they draw Nourishment; whereas the Clay, in dry Years especially, is so hard, that the Roots cannot penetrate it, and binds so firm, that it hinders the moisture that falls upon it from sinking through, and so causes the Roots to stand too moist in Winter, and scorches them with too much heat in the Summer.

To redress this defect, the only expedient is, to break up this sort of Land as deep and no deeper than the Earth is good, beginning with a Trench four or five Foot broad, the whole length or breadth of the place, casting the several Moulds all upon one side; and into your bottom, when your Trench is empty, cast in long Dung, or, which is much better, Fern, Leaves of Trees, rotten Sticks, Weeds, or any sort of Trash you can procure with the most Ease and least Charge, to rot and keep the Ground from binding.

This Trash should be laid at the bottom about half a Foot thick, and after that fling upon it your top



Spit, casting the Mould which lies uppermost (and which is ever best) upon the Dung, and so making the second Trench as the former, you should fill your first Trench so as that the Mould which you found undermost should now lie on the top; and thus you must continue to do till you have finished the whole Work.

But it may be here objected, that the Earth which you take from beneath will be barren and unfruitful, which indeed it will for the first Year, but being exposed to the Air, Rains and Frost of one Winter, it will be so mellow as to make it fruitful, especially if any thing of Dung be added to it; but if it prove any thing churlish, an addition of drift Sand will quickly loose the binding quality of it; and if it is cold Land, Smiths Ashes, or other Ashes, if you live near Towns where they are to be had, will be the best Manure for it; Pigeons, Fowls and Sheeps-dung are also very good for all sorts of cold Land. But 'tis to be observed, that rich Soils produce large fair Fruit, and Clay and Chalky Lands the best tasted, and most lasting. Garden-ware eating better that comes off of a natural Soil than what is forced with Dung, or any other Manure, except Chalk.

*Time of  
Trenching.*

The best time for the trenching up of Land is the beginning of Winter, when the Ground is moist and easie to dig; but as there are two Seasons of the Year to sow and plant Herbs, so there are two times to bring Gardens into order, which is the Autumn and the Spring; the first Labour being to be bestowed about the beginning of *November*, upon such Ground as you design to sow in the Spring, and to dig in the Month of *May* such Ground as you design for an Autumnal Sowing, that the cold in Winter, and the heat in Summer, may have an opportunity to make the Clods short and brittle, to turn them into Dust, and to kill the unprofitable Weeds; which if you do not find your first digging up to destroy, you may give your Land a second and a third Digging in the hottest driest time you can; which is the only time to destroy all such sort of trumpery.



But where you meet with a gravelly bottom, you should husband it as is already prescribed, and the Stones which are mingled with the Earth should be carried out; but in case the Gravel lie not very thick, and that when it is broke up, you meet with Sand or small loose Gravel, it may do without flinging it out of the Trenches, because the Trees, by help of the Dung, will strike Root in it.

And tho' these are chargeable ways of ordering of Gardens, yet it is done once for all, and the Charge will be abundantly answered in the Growth of what Plants you set in it, especially for Fruit or other Trees that root downwards; but some are more curious, in that they Skreen all the Earth with which they fill their Trenches; but that is needless for the whole Garden, particular Beds on which you design to raise particular Seeds or Plants being sufficient to be so ordered.

Besides which, you must have an equal Composition of *Manure* or mixture of Dung and Earth always ready in some corner of your Garden to be laid by, that it may be thoroughly rotten and turned to good Mould against Spring, to renew the Earth with about your Artichokes, and for the planting and sowing of Colliflowers, Cabbages, Onions, &c. *Vid.* the Culture of *Orchards*.

And for each sort of Seeds and Plants it will be necessary to lay out particular Beds, which may be the *Laying out of Beds.* more or less in Number, according to the variety of Seeds you have to sow, and Herbs to plant, and which ought not to be wider than you can reach cross; that you may, by Paths left between them, come to weed them, and rake them fine; which is the best way of sowing Seeds, &c. In the warmest sunny part of your Garden or Orchard place your tenderest Plants, or such as you would have forward, observing to keep them, as warm as their nature requires, either with Soil or covering, according to the Season.



*Seeds to  
sow.*

The surest way to have the most Advantage of your Dung or Soil, and to have Seeds prosper, that they may come up most even, and be all buried at one certain depth, is thus; First rake your Bed even, then throw on a part of your mixture of Earth and Dung; which also rake very even and level, on which sow your Seeds, whether Onions, Leeks, Lettice, or such like; then with a wide Sieve sift on the Earth mixed with Dung about a quarter of an Inch thick, or a little more, and you shall not fail of a fruitful Crop.

*Shelter.*

In Gardens, as well as in Fields, care must be taken not to sow one sort of Crop too often in one place, or on the same piece of Land, especially Parsnips or Carrots; which being often sown without change of place, are apt to canker, or be worm-eaten.

If your Garden be exposed to the cold Winds, which are very injurious to most sorts of Plants: Next unto Trees, Pales, Walls, Hedges, &c. the best shelter is to lay your Ground after this following manner: Let it be laid up in ridges a Foot or two in height, somewhat upright on the back or North-side thereof, and more sloping to the South-side, for about three or four Foot broad, on which side you may sow any of your Garden Tillage; these Banks lying one behind the other will much break the Winds, and these shelving sides will much expedite the ripening of Pease and other Fruits, by receiving more directly the Beams of the Sun; in case the Ground be over-moist you may plant the higher, and if over-dry, then the lower; so that it seems to remedy all extreams except Heat, which rarely injures. Plants newly brought from a hotter Climate than where you plant them, ripen later than those used to it, as those brought from a colder Climate ripen sooner.

'Tis usual to defend several tender Plants from the Cold in Winter to preserve them, and to expose them to the Sun in such Winter-days as prove clear; which exposure injureth the Plants more than the cold, for

the



the Sun-beams in frosty Weather especially, if there is Snow upon the Ground, makes a Plant faint and sick, as is observed in Laurel; which if it grow against a North-wall, or in the shade, altho' open to the severest Winds, yet it will retain its green colour all the Winter; but if it stand in the Sun, it changeth yellow: The same is observed of several other tender Plants that are usually sheltred from the Wind, and exposed to the Sun; yet 'tis not improper to give Plants Sun and Air in any time of Winter that is mild, but not in Frosty or bleak Weather.

To make a Hot-Bed, in *February* or earlier, for the raising of Melons, Cucumbers, Radishes, Colliflowers, or any other tender Plants or Flowers, you must provide a warm place, defended from all Winds by being inclosed with a Pale or Hedge made of Reed or Straw about six or seven Foot high, of such distance or capacity as your Occasion requires, within which you must raise a Bed of about two or three Foot high, and three Foot over of new Horse-dung of about six or eight Days old, treading it down very hard on the top, to make it level; and if you will you may edge it round with Boards or Bricks, laying of fine, rich Mould about three or four Inches thick on it; and when the extream heat of the Bed is over, which you may perceive by thrusting in your Finger, then plant your Seeds as you think fit, and erect some Forks four or five Inches above the Bed, to support a Frame made of Sticks and covered with Straw or Bass-mat to defend the Seeds and Plants from cold and wet; only you may open your covering in a warm day for an hour before Noon, and an hour after. Remember to earth up your Plants as they shoot in height, and when they are able to bear the cold you may transplant them, and the Dung of your hot Beds, when done with, will be of great use to mend your Garden.

Many curious and necessary Plants would suffer were they not carefully watered at their first removal, or in extream dry Seasons, therefore this is not to be



neglected early in the Spring; but whilst the Weather is cold be cautious of watering the Leaves of the young and tender Plants, and only wet the Earth about them.

When your Plants or Seeds are more hardy, and the Nights yet cold, water in the Forenoons; but when the Nights are warm, and the Days hot, then the Evening is the best time.

If you draw any Water out of Wells or deep Pits, it ought to stand a Day in the Sun in some Tub, or such like; for your tender Plants in the Spring, before you use it.

But Pond, River, or Rain-water needs it not, and is to be preferred before Well or Spring-water.

If you infuse Pigeons-dung, Sheeps-dung, Hens-dung, Ashes, Lime, or any fat Soil, or other matter in your Water, either in Pits, Cisterns, or other Vessels for that purpose, and therewith cautiously water your Plants, it will much add to their encrease.

For *Colliflowers*, *Artichokes*, and such like, let the Ground sink a little round the Plant in form of a shallow Dish, and the Water will the better and more evenly go to the Roots.

Water 'not any Plants overmuch, lest the Water carry away with it the vegetative or fertil Salt, and so impoverish the Ground, and chill the Plant.

But it is better to water a Plant seldom and thoroughly, than often and slenderly; for shallow watering is but a Delusion to the Plant, and provokes it to Root shallower than otherwise it would, and so makes it more obnoxious to the Extremity of the Weather.

Slips or cuttings of Herbs or Plants should be planted in moist Ground from *August* to the end of *April*, and be frequently watered, and separated at a Knot, Joint, or Bur, or two or three Inches beneath it, and be stripped of most of their Leaves before you plant them, leaving no side Branches on them; some slit the end where 'tis cut off, and some twist it.

All



All such Plants must stand two Years at the least before they be fit to remove.

If you are willing to have the Ground always moist about a Plant, place near it a Vessel of Water, putting therein a piece of Woollen Cloth or Lint, and let the one end thereof hang out of the Vessel to the Ground, and the other end be in the Water in the manner of a Crane, causing the Lint or Cloth to be first wet; and by this means will the Water continually drop till all be dropped out of the Vessel, which may then be renewed, only you must observe to let the end that hangs without the Vessel be always lower than the Water in the Vessel, else it will not succeed; and if it drop not fast enough, encrease your Lint or Cloth; if too fast, diminish it.

If the Weather be never so dry when you sow any sorts of Seeds, water them not till they have been in the Ground forty-eight Hours, and the Ground settled about them, that they may be a little glutted with the natural Juice of the Earth, first, lest they burst by too much Water coming on them at once. If the Ground is very dry when you sow Seed, sow them somewhat the deeper.

Such Herbs as are for Physical Uses, or to Still, are esteemed to have the greatest Virtue in *May*, or when in Flower, when the full Sap is in them, but the Roots are best in Winter, but then they should be sown between the middle of *July* and the latter end of *August*, or very early in the Spring. Those which are very tender should be sown in Hot-beds, and afterwards being removed into thinner Order be set on good Ground, and constantly kept watered if the Weather be dry: But you must remember, that what is raised on Hot-beds are to be covered, and defended in case of cold Nights or Mornings until they have got some Strength, or are out of danger by the Temperateness of the Season, and that those sorts of Herbs and Flowers are to be sown early, that either Seed, or die the same Year they are sown, that



they may have the benefit of the whole Summer's growth.

The cutting off of the Buds and Branches of Flowers, and other Plants leaving only one Stem or two more or less, according to the strength of the Root, causes both the Flower and Fruit to be larger; and Herbs also often gather the more strength, yield the fairer Leaf, take the better Root, and endure the Winter the better for their being cut; for the Sap, by this means, has the less to nourish, and the less is expended above, the more the Roots are strengthened, as may be observed, in most Trees that are lopped; nay, some Plants perish in Winter only for want of being cut in the preceding Summer. Besides, the often cutting of Plants prevents their growing sticky and running to Seed, which often hazards the killing of them; and 'tis observable, that all Herbs wax sweeter both in Smell and Taste for often cutting, especially the latter Sprouts, as may be found in all Esculents.

Flowers and Garden-Fruits are commonly most esteemed for their coming early or late. How to make them early, I have already described, but to retard them, sow or plant them in as late a Season as you can. Remove them often, and prevent as much as you can the usual Excitements of Sun and Air, for the disturbing of the Roots in the removal is a great Hindrance to their Attraction of Nourishment, and new Fibres will not shoot forth to attract new Nourishment 'till several Days after their removal.

Most sorts of Pot and Sweet Herbs may be sown from the beginning or middle of *March* until *August*, in Grounds that are of good temper, but then in extrem hot and dry Weather they require a more than ordinary care to be taken of them, but Grounds that are of a moist cold Nature should neither be sown too early nor too late; because, if sowed early, they chill the Seeds and rot them, and the Frosts are apt to spew them out of the Ground, and sometimes the  
Worms



Worms are apt to destroy them: And if the Seed is sowed late, such Grounds are apt to chap or bind, except they are well watered.

Keep or set all your Herbs that are durable in one quarter in Beds by themselves, by which means that part of your Garden will be always in order; and do not set too many in a Heap or Cluster together.

The Sun shining on Trees or Plants does greatly refresh and enliven them, especially in Winter when 'tis not a Frost, and therefore let the Situation of your Orchard or Garden have as much of the Sun as you can.

The removing of Flowers, Plants, &c. in their proper Season, preserves both their Colours and Kinds; for the long standing of them in the same Soil causes any Plant to degenerate, because the Plant will exhaust the proper Nourishment by its long standing, and also the Soil it self is apt to change the Nature of the Plant exotick to it, as may be observed in most Grains and Plants, which by often removing grow fairer and larger.

The best time to remove Bulbose Roots is as soon as the Flower is faded, and the Leaves of the Plant withered, which may be done the sooner if when the Beauty of the Flower is past, you cut off the Stalk to prevent its Seeding, such Plants being better removed in Summer than Winter. It does these sorts of Roots no harm to keep them five or six Months out of the Ground, but they must be kept dry lest they should mould or grow; but Roots of a hollow spongy Nature, as Frittilarias, Hyacinthis Roots of Ranunculas's, &c. If you keep them long, you should mix with them some fine dry Sand. These general Rules being observed, I shall thirdly proceed to the Alphabetical Order promised; and begin with  
A.

*Alesander.*

*Alesander* is propagated only by Seed that is oval and pretty big, and a little more swelling on one side than the other, which bends a little Inwards, streaked  
all



all along and cross-ways on the Edges between the Sides. It's one of the Furnitures of our Winter Salads, which must be whitened in the same manner as *Wild Endive* or *Succory* at the end of Autumn, its Leaves being cut down, and the Bed wherein it grows covered over with long dry Dung or Straw, skreened so close that the Frost may be excluded from it, whereby the new Leaves that spring there-from will grow white, yellowish, and tender. It's sown pretty thin in the Spring, and the Seed gathered the latter end of Summer, and the Plant being hardy, requires not much watering.

*Angelica.*

*Angelica* is of several sorts, but that growing in Gardens is of most use; 'tis raised by Slips or Seeds, which it bears in plenty the second Year, and then fades; neither the Slips nor Seeds should be planted or sown in too dry Ground. It flowereth in *July* and *August*, the Roots may be removed the first Year. If you let the Seed ripen the Roots commonly die, but by careful cutting of it you may prevent its Seeding, by which means both Root and Plant may be preserved many Years.

*Arrach.*

*Arrach*, *Orrach* or *Orage*, is propagated only by Seed, being one of the quickest Plants both in coming up and running to Seed, which last it doth the beginning of *June*. They sow it pretty thin, and some of it, which is good Seed, should be transplanted to a separate place. Its Leaves are very good in Potage and Stuffings. It should be used as soon as it peeps out of the Ground, because it decays quickly; and to have some the more early, they sow it in hot Beds. It thrives very well in all sorts of Ground, but grows fairest in the best.

*Asparagus.*

*Asparagus* is a fine Plant for the Kitchen, and was much esteemed, even in *Pliny's* time: They are raised of Seeds sown the latter end of March, or about

*Michaelmas,*



*Michaelmas*, because they lie long in the Ground before they grow, which some sow in the Shell as they grow, that is, four or six Seeds together; but the best way is to break the Shell, and to beat out the Seed, which put into Water, and the Husk will swim, and the Seeds sink, which dry before you sow: They must be sown indifferent thin, and the Ground kept clear of Weeds; let the Soil be neither too dry, too wet, nor cold; you may sprinkle a few Onions, Radishes, or Lettice the first Year; but you must draw them as soon as the *Asparagus* begins to spread, and about a Year after, if they are big enough, as they will be if the Ground is good and well ordered; if not, at two Years end at least you may transplant them; which is to be done at the end of *March* and all *April*, planting them in Beds about three or four Foot broad, and raised somewhat higher than the Path-ways that go between them. But as *Asparagus* are most expeditiously raised by Plants bought of the Gardiners of two or three Years old, who raise them on purpose for Sale, you'll find buying of them the most profitable way. In planting of them, mind to spread their Roots as much as you can. These Beds must be well prepared by digging first about two Foot deep, and four Foot wide, and made level at the bottom; mix very good rotten Dung with the Mould, and fill them up. They are planted at two Foot distance in three or four Rows. You must forbear to cut them for three Years, that the Plants may be strong and not stubbed, for otherwise they will be small; but if they be spared four or five Years, they will grow as big as Leeks; the small ones may be left, that the Roots may grow bigger, suffering those that spring up about the end of the Season to run up into Seed, and by this means it will exceedingly repair the hurt that you have done to the Plants in reaping their Shoots. When you have, upon the Winter's approach, cut away the Stalks, the Beds, about the beginning of *November*, must be covered



vered with new Horse-dung four or five Fingers thick; but some use Earth four Fingers thick, and two Fingers thick of old Dung, which will keep them from the Frost: The Beds are to be uncovered about the middle of *March*, and good fat Mould about two or three Fingers thick spread over them, and the Dung laid in the Alleys or elsewhere to rot, and be fit to renew the Mould with the following Spring, but Butcher's Dung is the best Soil for them where it can be had.

If the old Roots of these Plants be taken up about the beginning of *January*, and planted in a Hot-Bed, well defended from the Frost, *Asparagus* may be had at *Candlemas*; when you cut them, remove some of the Earth from about them, lest the others that are ready to peep be wounded, and let them be cut as low as conveniently may be.

The Beds for this Plant must be covered every Year with a little Earth taken off from the Path-way, because they, instead of sinking, are always rising by little and little; and every two Years they are to be moderately dunged: About *Michaelmas* the Stems must be cut down, and the fairest taken for Seed; and to make them come to bear, an Iron-Fork (the Spade being dangerous) is to be used to draw them out of the Nursery Bed. And you must not fail every Year at the latter end of *March*, or beginning of *April*, to bestow a small dressing or stirring of the Ground about three or four Inches deep on every Bed (taking care not to let the Spade go too deep, so as to hurt the Plants and to render the Superficies of the Earth loose) the better to dispose it to drink up the Rain and *May-dew*, which nourishes the Stocks, and facilitates the Passage of the *Asparagus*, and kills the Weeds. The worst Enemies to this Plant are a sort of Flea that fastens upon its Shoots, and makes it miscarry; against which mischief there has been yet no remedy found out; if they are planted in good Ground, they may stand ten or twelve Years.

*Artichok*



*Artich oak*

Is by some esteemed one of the most excellent Fruits of the *Kitchen-Garden*, and recommended, as upon other Accounts, so for that its Fruit continues in Season a long time. They delight in a rich deep Soil, and not very dry. The Ground for them must be very well prepared and mixed several times with good dung, and that very deep. The slips that grow by the side of the old Stumps taken from them at the time of their dressing in the Spring serve for Plants, which are to be set in *March*, *April*, or *May*, according as the Spring is, or their Husbandry requires; some plant them in *September*, which by careful covering in Winter may succeed, but the surest Season is the Spring; they must be kept watered 'till they are firmly rooted. You may sow Onions, Radishes or a sprinkling of Carrots or Lettice between them the first Year, but they must be disposed of before the Artich oaks spread too far. And these, if they be strong, will bear Heads the *Autumn* following; which Off-sets, to be good, should be white about the Heel, and have some little Roots to them. Sometimes *Artich oaks* are multiplied by the Seed which grows in the *Artich oak* bottom, when they are suffered to grow old to Flower, and to grow dry about *Midsummer*.

For the Planting of them they commonly make little Trenches or Pits about half a Foot deep, which they fill with Mould, placing the Roots of them by a Line chequer-ways. They root very deep, therefore plant your sets pretty deep, and if you lay a little Litter thinly about them to keep the Heat of the Sun from them, it will very much improve them. If the Soil be rich, the distance must be three or four Foot; but if not, then nearer. All their other Culture 'till Winter is only weeding, and a little watering if the Spring be dry, and if with the Water you mix Sheep's Dung or Ashes, or if you lay Ashes to the Roots it mightily helps them: But upon the approach of the Winter, for their Security against Frost,



Frost, be sure to cut the Leaf within a Foot of the Ground, and raise Earth about them in the form of a Mole-Hill, within two or three Inches of the top, and then cover it with long Dung, which secures them also against the Rain: But others put long Dung about the plant, leaving a little Hole in the middle, and this does very well. An Earthen Pan with a Hole at the top is used by some, a Bee-hive is better; but the most usual way is to cut their Leaves about *November*, and to cover them all over with Earth, and to let them lie in that manner 'till the Spring; but if this be done too soon, it may rot them when they come to be uncovered, and therefore it must be done regularly, at three several times, at about four Days Interval, lest being yet tender the cold Air spoil them. Take off all the old Slips, and leave not above three of the oldest to each Foot for the Bearers, and a supply of good fat Mould must be given to the Roots as deep as conveniently may be. Or you may do this, dig your Artichoak plat all over, and cut off the straggling Leaves both on the top and sides, and lay a coat of Dung all over them, especially about each Stock, and so let it rest 'till Spring; and in *March* or *April* dig your Plat well over, keeping a good open Trench before you, and when you come to a Stock open the Ground pretty deep about it, so low, that you may with your Thumb force the slips from the Stock, excepting two or three of the strongest, unless you find them forward for Fruit; and if any of your Stocks are dead or not thrifty, you may plant young ones in their places: But if your Artichoaks are weak by reason of a sharp Winter that you cannot slip them, you may let them alone 'till they begin to thrive, and then with a slice, without digging, you may force off all the under Slips, maintaining only two or three of the strongest for Fruit; when your Fruit begins to knit, see if any Buds for Fruit appear; if they do, force all off but the principal Head, except such as you spare for lat-



ter Fruit. The whole Plantation of them should be remov'd in five Years, tho' they will last much longer in a good deep Mould.

In order to have Fruit in *Autumn*, it is necessary the Stem of such as have born Fruit in the Spring should be cut off to prevent a second Shoot, and these lusty Stocks will not fail of bearing very fair Heads, provided they be dressed well and watered in their necessity, and the Slips that grow on the sides of the Plants (which drain all their Substance) taken away; or you may expect Fruit from your new set Plants.

As soon as your *Artichocks* are come to perfection, and fit for use, cut them down close to the Ground, Leaves and all, and by so doing your *Artichocks* will gather Strength before Winter, and your Plants will be the stronger, and forwarder in Spring.

The Stalk is blanched in *Autumn*, and the Pith eaten raw or boiled: The way of preserving them fresh all Winter, is by separating the bottoms from the Leaves, and after parboiling, allow to every Bottom a small earthen glaz'd Pot, burying it all over in fresh melted Butter, as they do wild Fowl, &c. They are also preserved by stringing them on Pack-thread, a clean Paper being put between every bottom to hinder them from touching one another, and so hung up in a dry place: They are likewise pickled.

*Chards* of *Artichocks*, otherwise called *Custons*, are the Leaves of fair *Artichocks*, ty'd and wrapp'd up in Straw in *Autumn* and *Winter*, being covered all over but at the top; which Straw makes them wax white, and thereby lose a little of their bitterness, so that when boiled they are served up like true *Spanish Cardons*, but yet not so good; besides, the Plants of them rot and perish during the time of whit'ning them.

For *Artichocks* you have not only the hard Weather and excess of wet to fear, but they have the Field-Mice for their Enemies, which by gnawing of their Roots spoil them.

There



There are three sorts of *Artichokes*, the *White* ones, which are the most early; the *Violet* ones, whose Fruit is almost of a Pyramidical Figure, being the hardiest sort; and the red ones, which are round and flat like the white ones; the two last are esteemed the best.

*Asarabacca.*

*Asarabacca* thrives best in a moist Soil, and is only increased by the parting of the Roots.

*B*

*Balm.*

*Balm* is an odoriferous Herb, being multiply'd both by Seed and rooted Branches like *Lavender*, *Hyssop*, *Thyme*, &c. The tender Leaves are used with other Herbs for Salads; the Sprigs fresh gathered put into Wine, or other Drink, during the Heat of Summer, give it quickness; and besides, this Plant yields an incomparable Wine made in the same manner as Cow-slip, &c.

*Barberries.*

*Barberries* are raised by Suckers, of which you have plenty about the Roots of old Trees, tho' 'tis not good to suffer too many Suckers to grow about them; neither let their tops be cut like close round Bushes, as many do, which makes them grow thick, that they can neither bear nor ripen Fruit so well as if they grew higher and thinner. It is a Plant that bears a Fruit very useful in House-wifery, whereof there are several sorts, altho' but only one common one; that which beareth its Fruit without Stones is counted best; there is moreover another sort which chiefly differs from the common kind, in that the Berries are twice as big, and more excellent to preserve.

*Basil.*

*Basil* is of several sorts, as that which bears the biggest Leaves, especially if they are of a Violet Colour: but that which bears the least Leaves is most Curious, and that which bears the middling ones is the most common sort; all which are propagated by Seed of a black Cinnamon Colour, very small, and a little



little oval, and by Slips. It is annual and very tender, being seldom sown but in Hot-Beds, beginning therewith at the beginning of *February*, and continuing so to do all the whole Year. Its tender Leaves are used in a small quantity with the furniture of Salads, among which they make an agreeable Perfume, the same being likewise used in Ragou's, especially when dry. To make it run to Seed (which is gathered in *August*) it's usually transplanted in *May*, either in Pots or Beds. This Plant imparts a grateful Savour, if not too strong: It is somewhat offensive to the Eyes, and therefore the tender tops are to be very sparingly used.

### *Beans.*

*Beans* are of great Use and Benefit, of which there are several sorts, *viz.* the great Garden Bean, the middle sort of Bean, and the small Bean, or Horse-Bean, &c. the last sort of which I have treated of already. As for Garden-Beans, they are usually set betwixt *November* and *February*, at the Wain of the Moon. But if it happen to freeze hard after they are sowed, it will go near to kill them, therefore the surest way is to stay till after *Candlemas*. They thrive best in a rich stiff Soil, they should be set five or six Inches deep, and carefully covered from the Mice; and the Ground kept well howed from Weeds. It is a general Error to set them promiscuously, for being planted in Rows by a Line, at three Foot distance, it is evident they bear much better, and may be easier weeded, topped, or gathered, and you may sow some early Salletting between the Rows. If they be sowed or planted in the Spring, they must be steeped two or three Days in Water, and it's best to set them with Sticks.

In gathering green Beans for the Table, it is the best way to cut them off with a Knife, and not to strip them; and after gathering, the Stalks may be cut off near the Ground, and so probably a second Crop may rise before the approach of the Winter.



Some cut off the Tops while they are about half a Foot high to make them branch, but then they must not be set too thick; others do not top them till they are about two Foot high or more, to the end they may ripen the better and the sooner; and that they may sow Turneps as soon as the Beans are gone. The Tops some eat boiled.

*Bears-foot.*

*Bears-foot* is only raised by Seed.

*Beet Raves, or Beet Radishes.*

*Red Beet* produces Roots for Salads, being multiplied only by Seeds of about the bigness of a midling Pea, and round, but rough in their roundness: They are sowed in *March*, either in Beds or Borders, very thin, in good well prepared Ground, or else they will not grow so fair and large as they should be; they are best that have the reddest Substance, and the reddest Tops, and are not good to spend but in Winter; their Seed is gathered in *August* and *September*, for the procuring whereof, some of the last Year's Roots that have been preserved from the Frost are transplanted in *March*; the Roots being cut into thin Slices and boiled, when cold, make a grateful Winter Salad.

*Beet White.*

*White Beet* is also propagated for Chards by Seeds only, like unto that of the Red Beets, but of a duller Colour; the Rib of it being boiled, melts and eats like Marrow.

*Chards of Beet,*

Are Plants of *White Beet* transplanted in a well prepared Bed at a full Foot's distance, producing great Tops, which in the midst thereof have a large, white, thick, downy and cotton-like main Shoot, which is the true Chard used in Pottages and Entremesses. When white Beets have been sown in hot Beds, or in naked Earth in *March*, that which is yellowest is transplanted into Beds purposely prepared, and being well watered in the Summer they grow big and



and strong enough to resist the hard Winter's cold, if so be they be covered with long dry Dung, as we do *Artichokes*. In *April* they are uncovered, and the Earth drest carefully about them, and so produced; their Seed is gathered in *July* or *August*.

*Bloodworth.*

*Bloodworth* is raised of Seed which is ripe in *June* and *July*.

*Bona vista.*

*Bona vista* is a kind of *French Bean*, and will grow with us, especially if the Summer is kindly; they are raised as *French Beans* are.

*Borage,*

Is propagated only by Seed that is black, and of a long oval Figure, commonly with a little white end towards the Base or Bottom that is quite separated from the rest, being streaked black all along from one end to the other. It grows and is to be ordered in the same manner as *Arach*, but it does not come up so vigorously. It is sown several times in one Summer; the Seed falls as soon as ever they begin to ripen, and therefore must carefully be watch'd, and the Stalks cut and laid a drying in the Sun, whereby few will be lost: Its Flowers serve to adorn Salads, but they are not easily digested, tho' their Leaves are, if their String is first taken away.

*Bugloss.*

*Bugloss* is ordered after the same manner.

*Bucks-horn Salad,*

Is only multiplied by Seed, which is very small, and is ordered after the same manner as *Borage*. When the Leaves of this Plant are cut, there spring up new ones in the room of them.

*Burnet.*

*Burnet* is propagated only by Seed that is pretty big, a little oval with four sides, and as it were all over engraven in the spaces between the four Sides. It is a very common Salad, seldom sown, but in the Spring it often springs afresh, after Cutting; the



Shoots are for Salads; the same requires watering in Summer, at the end whereof the Seeds are gathered.

## C

*Cabbage and Coleworts.*

*Cabbage and Coleworts*, whereof there are divers sorts, such as the *Dutch Cabbage*, which is very sweet and soon ripe; the large sided *Cabbage*, that is a tender Plant not sown till *May*, planted out in *July*, and eaten in Autumn; but the best *Cabbage* is the *White Cabbage*, which is the biggest of all; and the *Red Cabbage*, which is small and low; the *perfumed Cabbage*, so named from its scent; the *Savoy Cabbage*, which is one of the best sort and very hardy; and the *Russia Cabbage*, which is the least and most humble of them, but very pleasant Food, and quick of growth.

They are raised of the Seed sown between *Midsummer* and *Michaelmas*, that they may gain strength to defend themselves against the violence of the Winter, which yet they can hardly do in some Years; or else they may be raised in a hot Bed in Spring, and transplanted in *April*, or about that time, and that into a very rich and well stirred Mould, if large *Cabbages* are expected. They delight most in a warm and light Soil, and require daily watering till they are rooted. But yet great quantities of ordinary *Cabbage* may be raised in any ordinary Ground if well digged and wrought.

As for the Seed, if you intend to preserve it, it must be of the best *Cabbages*, placed low in the Ground during the Winter, to keep them from cold Winds and great Frosts; they must have Earth Pots, or a warm Soil over them for their covering, and be planted forth at Spring; or you may about *October* or *November*, when the Frost begins to come, take up such as you desire to have the seed of before the Frost surprize you, and hang them up by the Roots about a Fortnight to drain the water from them; they should be hard well grown *Cabbages*, such being forwarder to seed when the season comes than others. These

you



you may forward by cutting off the Cabbage on the top with a cross cut, and you may likewise wrap a piece of old Cloth, Bass-mat, &c. about the Roots of them, and lay them in some cold Cellar, or By-room, or hang them up until the end of *February*, or the beginning of *March*, and then plant them in some temperate place, that is neither too hot nor too dry. The Stems of a good Cabbage, if you can preserve them from rotting and frost till Spring, will bear as good seed as a whole Cabbage. You must likewise keep your Cabbages from breaking with the Wind, by tying them to Sticks. Besides, this variety of Cabbages, Cauls and Sprouts, springing from old decapitated Stumps, there is a perennial Caul that will continually yield you a green Mess whenever you have occasion.

If your *Cabbages* or *Colliflowers* are troubled with Caterpillars, mix Salt with Water, and water them therewith, and it will kill them.

*Calamint.*

*Calamint* is raised by Slipping, or parting of the Roots, and sometimes by Seed.

*Camomile.*

*Camomile* double is like the common sort, only the Leaves greener and larger, and the Flowers are very double, being white, and somewhat yellow in the middle. It is more tender than the common one, and must yearly be renewed by setting of Slips thereof in the Spring, or parting of the Roots.

*Carduus Thistle.*

*Carduus*, tho' it is a noisom Weed, yet some of them are received into Gardens, whereof are first the greater *Globe Thistle* with Leaves cut in, and gashed in the middle full of sharp Prickles, its branched Stalk above a Yard high, bearing great round hard Heads, with a sharp bearded Husk of a blewish green colour, from whence come pale blew Flowers spreading over the whole Head, and are succeeded by the Seeds contained in the Husks, which must be preserved, for the Plant dies in the Winter. Secondly, the lesser *Globe*



*Thistle*, whose Leaves are smaller and whiter, as are the Stalk and Head of the Flowers, the Roots more durable, lasting four Years bearing Flowers.

Their flowering time is usually in *August*, and being sowed of Seeds, they will come to bear Flowers in the second Year; they prove a great annoyance to some Lands by killing the Grass, Corn, &c. tho' they be a sure token of the strength of the Ground. The way to destroy them, is to cut them up by the Roots before Seeding-time. Our *Ladies milky dappled Thistle* is worth esteem, for the young Stalk, about *May*, being peeled and soaked in Water, to extract the Bitterness, either boiled or raw, is a very wholesome Salad eaten with Oil, Salt and Pepper; some eat them sodden in proper Broth, or baked in Pies like the *Artichoke*, but the tender Stalk boiled or fried some prefer; both are nourishing and restorative.

*Carrots.*

*Carrots* are the most universal and necessary Root this Country affords, and hereof there are two sorts, the Yellow, and the Orange, or more Red; the last of which is by much the better. They are raised of Seed, and principally delight in a warm, light or sandy Soil; and if the Ground be so, tho' but indifferently fertile, yet they will thrive therein; for if the Ground in which you plant them be heavy, you must take the more care in digging of it to lay it as light as you can; and if you dung the Land the same Year you sow Carrots, you ought to bring it so low, that the Roots may not reach it; for as soon as they touch the Dung, they will grow forked. It's a usual thing to sow them with Beans in the Intervals between them, and in digged, not ploughed Lands, because of their rooting downwards; for after the Beans are gone they become a second Crop; but Carrots sown among Beans are not so fair nor early as those sown in a Bed by themselves; and some of the fairest of them being laid up reasonably dry in Sand, will keep throughout the Winter: The same may be reserved till Spring,  
and



and planted for Seed, or else Seed may be gathered from the biggest aspiring Branches; observing to preserve the largest and fairest Seed for sowing. They may be sown in Autumn or Spring: If you will have them in spring, sow them in *August*, and preserve them from the frost in Winter by covering of them with Pease haum, or such like; or sow them in *February* or *March*; and to make them grow large, do with them as with Turneps, only they will admit of a greater number on the same quantity of Land than Turneps will.

*Cardon Spanish.*

*Cardon Spanish* are only propagated by Seed that is of a longish oval Form, and about the bigness of a Wheat Corn, of a greenish, olive Colour, streaked from the one end to the other. They are sown at two severall times; the first from the middle of *April* to the end, and the other time about the latter end of *May*, in a good and well prepared Ground, in small Trenches or Pits a Foot wide, and six Inches deep filled with Mould, and then make for them Beds four or five Foot wide, in order to place in them two Ranks of those Pits chequerways, putting five or six Seeds into every Hole, with Intention to let but two or three grow, and take away the rest if they come up: But if in fifteen or twenty days the Seed doth not come up, they should be uncovered, to see whether they be rotten, or begin to sprout, that their Places may be supplied with new ones if need require; they must be carefully watered; and towards the end of *October*, if you have a mind to whiten them, take the advantage of a dry Day, first to tie up all the Leaves with two or three Bands, and some Days after to cover them quite with Straw or dry Litter, well twisted about them, except at the top, which is to be left open; thus ordered they whiten in about three Weeks, and are fit to eat.



They may be transplanted upon the approach of Winter into the green House, removing some Earth with them, some of which may be planted next Spring to run to Seed in *June* or *July*.

*Chervil.*

*Chervil* is only multiplied by Seed that is black, very small, pretty longish, striped longways, and grows upon Plants sown the Autumn before, which knits and ripens in *June*; the musked sort thereof is one of our Salad Furnitures; and at the beginning of Spring while the Leaves are tender is very agreeable. It remains many Years without being spoiled by the Frost. As for the ordinary ones for Salads it is annual, and a little thereof should be sown Monthly, as there is occasion for it. It runs very easily to Seed, and if you would have some of it betimes, it must be sown by the end of Autumn; the Stalks are cut down as soon as they begin to grow yellow, and the Seed beaten out, as is done by that of other Plants.

*Ciboules.*

*Ciboules* or *Scallions* are a kind of degenerate Onion, and are propagated only of Seed. They are sown in all Seasons, but herein they are different from Onions, in that they produce but a small Root, and several Stems or upright Shoots, and those which produce most of them are most esteemed, of which you should be careful to save the Seed which is ripe in *August*, if planted in *March*. They must be thinned as well as Onions, and some that are transplanted will prosper well in dry Summers, if their Beds are well watered, and they are planted in good Earth. The red, hard and sweet are the best. They are reckoned very good to excite appetite.

*Citruls, Pumpions or Pumkins,*

Are propagated only by Seeds of a flat and oval Figure, partly large and whitish, and as it were neatly edged about the sides; there are two sorts of them, the green and the whitish; they are usually sown in Hot-Beds about the middle of *March*, and beginning  
of



of *April*; and being taken up with the Earth about them, are transplanted into Holes two Foot Diameter, and one deep, and at two Fathoms distance, which are filled with Mould; in *June*, when their Vines begin to grow five or six Foot long, some Shovelfuls of Earth are thrown upon them to prevent their being broken with the Wind, and to make them take Root at the place so covered, whereby the Fruit that grows beyond that part will be better nourished, and so grow bigger. If the Weather is dry, they should be well watered, and about the blossoming time, take away all the by Shoots, leaving only one or two main Vines, and beware not to hurt the Heads of them. Whilst they are about the bigness of a Melon, they eat well pickled.

*Cives.*

*English Cives* are multiplied only by Off-sets that grow round about their Turfs; from them a part is taken to replant, being split out and separated into many little ones, and transplanted nine or ten Inches asunder, either in Borders or Beds in pretty good Ground: They will last three or four Years without removing, or any other Culture than weeding and watering sometimes during the heat. It is their Leaves only that are used for one of the Sallet Furniture.

*Clary.*

*Clary*, when tender, is an Herb not to be rejected in Sallets. It's raised of Seed, but the Root perisheth after the Seed is ripe; which is the second Year after 'tis sown. It flowereth in *June*, *July* and *August*.

*Coastmary.*

*Coastmary* is raised by Slips or parting of the Roots, and sometimes by Seed.

*Cole-Flower, or Cauly-Flower.*

*Cole*, or *Cauly-Flower* is an excellent Plant, whose Seed may be sown at any time between *Midsummer* and *Michaelmas*; the Seeds should not be sown too thick and be covered about an Inch thick at least with  
fine



fine Mould; they ought carefully to be preserved over the Winter, by Matts or other close shelter; or else they may be raised in Hot-Beds in the Spring, by sowing of the Seeds in *February*, but upon all opportunities, when the Air is temperate uncover them, that you may harden them by degrees; and when your Plants are about two or three Inches high, make another Bed of less substance than the first; and being of fit temper, that is, near as warm as the Bed from which you removed them, set them about three Inches asunder, not forgetting to water them as often as need requires, and keep them shaded while they are new planted, in case of dry Weather; some arch the Beds over with Pots or Hoops, that they may the better cover them in cold Weather, or when much Rain comes, and when they have indifferent large Leaves they may be removed into good Lands prepared for that end; tho' the best way is to dig small Pits, and fill them with rich light Mould, wherein the *Cole-Flower* must be planted, and afterwards carefully watered: Thus you may be furnished with Winter Plants for Seed. Those that are of one Year's growth usually Flower about a time; to prevent which, some of the Plants may be removed once a Fortnight, for two, three, or four times as a Man pleases, and so they may be had successively one after another; or else the Flower may be cut off before it is fully ripe with a long Stalk, and set in the Ground, as far as may be, and it will retard its ripening; but it must be shaded, and have a little watering lest it wither.

*Conval-Lily.*

*Conval-Lily*, *May-Lily*, or *Lily of the Valley*, has a strong Root that runs into the Ground, and comes up in divers Places with three or four long and broad Leaves, and from them rises a naked Stalk, with white Flowers at the top like Bottles with open Mouths, of a comfortable sweet Scent. There is another sort differing from these only in Flowers, which are



are of a fine pale Red, both of them flowering in May, and bearing best in a shady mean Soil, being easily propagated from Plants.

*Corn Sallet.*

*Corn Sallet* is an Herb whose top Leaves are a Sallet of themselves, seasonably eaten all the whole Winter, and early in the Spring with other Sallets; it is raised of Seed at first, but afterwards will sow it self. *Vid. Maches.*

*Cresses.*

*Cresses* Garden, *Indian* or *yellow Lark-Spurs*. They are sown in many Gardens for culinary Uses; and the latter from a Flower, are now become excellent Sallets as well the Leaf as the Blossom; for early Sallets they are raised in Hot-Beds: But if sown in April, they will grow very well on ordinary Garden-ground, and their Leaves and Blossoms plentifully encrease. *Water-Cresses* are eaten boiled or raw, and like the other sort of *Cresses* are raised of Seed.

*Cucumbers.*

*Cucumbers* are of two sorts, the large green *Cucumber*, vulgarly called the *Horse-Cucumber*, and the small White which is the more prickly *Cucumber*. The first are best for the Table green out of the Garden; but the other to preserve. They are planted and propagated after the same manner as *Melons*, only they require more watering, and are withal much more hardy, if planted late, else they are as tender; but though the watering makes them more fruitful, yet they are more pleasant and wholesome if they have but little Water; and though they should be watered in dry Weather, they are to be defended by some covering from the Rain in cold wet Weather, and if the top Shoot of *Cucumbers* be nipped off when shot out three or four Joints, it will cause them to knit the sooner for Fruit; if you sow them any time in March it will be soon enough, and if you have Glasses you need not make up a Bed for them on purpose, but only make Holes about the bigness of a Bushel,



Bushe], which fill with warm stable Dung, in the midst of which plant three or four *Cucumber* Plants with mould about them, and Earth them up round like a Dish to hold Water. If you raise them tenderly under Glasses, you must use them tenderly, otherways any cold Rains will be apt to spoil them; but if you raise them without Glasses, you must not plant them out 'till warm dry Weather, and at first observe to shade them well from the Sun, and to give them Air as often as you can when the Weather is good, only lightly covering of them with Mats or Straw every Night, if 'tis likely to be cold, and remember at first planting of them to water them; and if you will not be at the trouble of raising of them on a hot Bed, you may at any time from the middle of *April* to the beginning of *May*, make Holes as is before described; and in the midst of each put five or six *Cucumber* Seeds, and the Weather being warm, water them now and then as you see occasion. If your Plants thrive, three in a Hole will be enough to leave, the rest you may pluck up or plant elsewhere. If you desire to have any for Seed, save of those which are ripe forwardest, for the riper and better grown your Seed is, the longer it will last, even to three or four Years old, and the riper it is, the less Labour it will require to wash from the Pulp.

*Currants.*

*Currants* or *Corinths* first took their Names from their likeness to the small *Grapes* or *Raisins* which come from *Corinth*. They are raised by Suckers or Cuttings stuck in moist places, of which you may have plenty about the Roots of old Trees, which when they have grown for some Years, suffer not many Suckers to grow about them. Do not cut the tops to a round close Bush, as many Gardeners do; whereby they grow so thick, that they neither bear nor ripen their Fruit so well as if they grew taller and thinner. The *English* red *Currant* (formerly transplanted to *England*) is not now valued, nor yet the Black: The white

*Currant*



*Currant* 'till of late was most in esteem, but the red *Dutch Currant* becoming Native of our Soil, has been so much improved in moist rich Grounds, that it hath obtained the higher Name: Besides which, there is again another sort (propagated among us) to be esteemed only for Curiosity, not for Fruit. Their Culture consists in cutting away the old Wood, and preserving only that of one or two Years growth; for a confused Mixture is not only disagreeable and pernicious, but the old Branches will bear nothing but very small Fruit, 'till at last they quite degenerate; therefore when the Stocks grow old, you should raise a Plantation of new ones in some other fresh choice piece of Ground, after they have stood about seven or eight Years.

*Currants* will thrive mightily, and grow very large, if spread upon a Wall even against a North-Wall, especially white *Currants*.

*Currants* and *Goose-Berries* may be inoculated on their own kind.

D.

*Dandelion.*

*Dandelion* is an Herb which is macerated in several Waters to extract the Bitterness. It is little inferior to *Succory*, *Endive*, &c. The French Country People eat the Roots of it.

*Dill.*

*Dill* is raised of Seed, which is ripe in *August*.

*Dittander.*

*Dittander* is raised by Sprouts growing from the old Roots.

*Dragon.*

*Dragon* is increased by Off-sets or young Roots, and sometimes by Seed.

*Elecampane.*

*Elecampane* delights in a moist Soil, is raised by Seed, and by parting of the Roots; it Flowers in *June* and *July*, the Roots are best which are gathered in *Autumn*.

*Endive,*



## E

*Endive white, or Succory.*

*Endive*, or *Succory*, is of several sorts, as the white, the green and the curled, which are only propagated by Seed that is longish, of a white grey Colour, flat at one end, and roundish at the other: It grows upon the Stocks or Stems of the preceding Year's growth, and you would take it but only for little bits of Herbs cut small. The wild is also propagated in the same manner, from longish black Seed; and is a sort of very good annual Plant used in Sallet and Pottage in Autumn and Winter Seasons, if so be it is well whitened, and so made tender. All sorts of them agree pretty well with any kind of Ground, and are seldom begun to be sown till the middle of *May*, and then very thin, or they must be thinned afterwards, in order to be whitened in the place where they first grew, without transplanting; there is also but a little quantity of them to be sown at once, because they are apt to run into Seed; but for a greater quantity let them be sown the latter end of *June*, and all *July*, in order to have some good to spend in *September*; after this a great quantity is sown in *August*, for a sufficient Supply to serve the Autumn and fore-part of the Winter. When they are transplanted in Summer-time, they must be set at a large Foot distance, and great Beds of five or six Foot broad are usually made for them, to plant them afterwards in Lines marked out with a Cord; this Plant requires great and frequent waterings, and when big enough to be whitened, it is tied up with two or three Bands according as its height requires, and it is whitened in fifteen or twenty Days: but to preserve it upon the approach of cold, it must be covered with long dry Dung, whether it be tied up or not; some whiten it, and other sorts of Sallets of the same kind by laying of them in Sand or Earth, either within or without Doors; at the end of *September* the Stocks are planted pretty near one another, because it nei-  
ther



ther grows so high or spreads so much as in Summer : And in case any Plants can be saved in Winter, they must be transplanted again in the Spring, in order to produce Seed, that they may have a sufficient time to ripen. For the wild Endive it is sown in *March* pretty thick in a well prepared Ground, and fortified by watering and cropping, that it may be fit to whiten in Winter ; the best way to whiten which, is to interpose some Props from side to side to keep the Dung, where-with it must be well covered, from touching of it. It will shoot under a close cover, and therefore care must be taken to stop up well the Passages on all sides, that no Light or Air at all can get in ; for hereby the Roots are much cleaner, and relish not so much of the Dung. It may be transplanted into Conservatories in Winter. When it is green it endures the Frost well enough, and runs into Seed the latter end of *May*. Many People eat its Shoots in Sallets when they are young and tender : It is eaten with *Mint, Rocket, Tarragon*, and other hot Herbs.

*Eschalots.*

*Eschalots* are now from *France* become an *English* Plant, being increased and managed after the same manner as *Garlick*, which may be seen for that purpose ; only they are to be set earlier, because they spring sooner, and taken up as soon as the Leaves begin to wither ; long after which, they must not lie in the Ground, for either they rot there, or the Winter kills them : They give a fine relish to most Sawces, and the Breath of those that eat them is not offensive to others ; but being planted two or three Years in the same Ground they are apt to degenerate.

F.

*Featherfew.*

*Featherfew* is both single and double, and is increased by Seeds or Slips ; and also by dividing of the Roots ; it flowereth most part of the Summer, and should have a good Soil.



*Fenil.*

*Fenil* is only propagated by Seed that is small, longish, oval and streaked with greenish grey streaks; it is one of our Sallet-furniture, that is seldom transplanted, and resists the cold of the Winter if it is sowed in Beds or Borders; it springs again when it is cut, and its youngest and tenderest Shoots are the best: The Seed is gathered in *August*, and agrees well enough with any sort of Ground.

*French-Beans, or Kidney-Beans.*

*French or Kidney-Beans*, are a sort of Cod-ware that are very pleasant wholesome Food, being but lately brought in use amongst us, and are not yet sufficiently known: There are four sorts thereof. First, The Scarlet-Bean which has a red Husk, and is not the best to eat in the Shell, as Kidney-Beans are usually eaten, but is reputed the best to be eaten in Winter when dry and boiled. Secondly, The painted or streaked Beans which are the hardiest, tho' meanest of all. Thirdly, The large white Bean which yields a fair delicate Pod. Fourthly, The small white Bean which saving in size is like the latter, but esteemed the sweeter. They delight in a warm, light and fertile Ground, which being about the beginning of *May*, or very soon after, planted with them at a Foot distance, and two Fingers deep, will yield an extraordinary Crop. But as they are very uncertain in taking, plant but a small quantity in a Day, and two or three Days after, a small quantity more, and so on, that you may not plant all your quantity together, for they will often take one Day and miss the next; but where they come up too thick, they may be transplanted, only they must be well watered at first planting: You may either set up tall Sticks near for them to twine about, or let them lie on the Ground; but if you are straitned in room, those on Sticks will yield the greatest increase.

*Garlick.*



G.

*Garlick.*

*Garlick* is increased by parting of the Cloves or Offsets in *February* or *March*, and planting of them in a rich good Soil, in which they will encrease wonderfully. Their Leaves about the end of *June*, may be tied in knots, which will prevent their spindling, and keeping down of the Leaves will make the Roots large: Much more of this Root would be spent for its wholesomeness, were it not for the offensive smell it gives to the By-standers, which is taken away by eating of a Beet-root roasted in the Embers; but yet by *Spaniards* and *Italians*, and the more Southern People, it is familiarly eaten with almost every thing, and esteemed of singular Virtue to help Concoction. As soon as it has done growing, it should be taken up, and kept dry for use.

*Gentian.*

*Gentian* is of several sorts, but the most valued are,  
1. The *Great Gentian*, bearing a yellow Flower. 2. The *Gentian* of the Spring; that on the top of its stalks bears a large, hollow, bell-fashioned Flower, of an excellent blew, with some white spots in the bottom of the inside. Its Roots are small, pale, yellow Strings that put forth Leaves, whereby it yields a great increase. This last flowers from *April* till *May*, as the first does from *June* to *July*, which increases slowly by the Root, and is hardly raised from Seeds: And if there be any got from them, it will be many Years before they come to bear Flowers. The Root must be planted in *September*, in rich Ground, under a South Wall, and carefully defended from Frosts in the Winter; the other will prosper in almost any Soil, so it be in an open Air.

*Germander.*

*Germander* is raised by setting of the Tops or Slips; it flowereth the greatest part of Summer.



*Goats-rue.*

*Goats-rue* is increased by Seeds or Slips near the Roots; it flowereth in *July* and *August*.

*Goose-Berries.*

*Goose-Berries* must be ordered the same way as before is prescribed for *Currants*. They are of six sorts, as white, green, yellow, red, black and strip'd. *Goose-Berries* may be raised of Seed, they should be removed once in eight or ten Years. They delight in a rich dry Soil, and *Currants* in a moist Soil.

## H.

*Harts-horn.* See *Bucks-horn*.

*Harts-tongue.*

*Harts-tongue* is propagated by parting of the Roots, and also by Seed.

*Horse-radish.*

*Horse-radish* is increased by Sprouts spreading from the old Roots, or by pieces of Roots left in the Ground, that are cut or broken off; and if you take up any Roots for use, you may cut off all the Roots except a small part next the Leaves, which you may plant again: If you abate the Leaves to about an Inch long, and water it well; the best time of increasing of the Roots, is in the Spring. It delights in a rich Soil.

*Hyssop.*

*Hyssop*, or *Hyssope*, is raised by Seeds, Slips, or the Tops planted out.

## I.

*Jack by the Hedge.*

*Jack by the Hedge* (*Alliaria*, or *Sauce alone*) is an Herb that grows wild under Banks and Hedges, and has many Medicinal Properties, being eaten as other Sallets are, especially by Country People, and is much used in Broth.

*Jerusalem Artichokes.*

*Jerusalem Artichokes* are increased by small Off-sets, and by quartering of the Roots, by which means they will



will make a very great increase in a small spot of Ground. See *Potatoes*.

*Jerusalem Sage.*

*Jerusalem Sage* is raised of Slips, like other Sage.

K.

*Kidney-Beans.* See *French Beans*.

L.

*Lavender.*

*Lavender* is multiplied by Seed, and old Stocks or Plants transplanted, but chiefly by Slips; it serves to garnish Borders of the Kitchen-Gardens, and yields a Flower which is used for several Physical Uses, and to put among Linen to perfume it.

*Lavender Cotton.*

*Lavender Cotton* is increased by Slips, and makes fine Borders.

*Leeks.*

*Leeks* are raised of Seed, as *Onions* are, and sown about the same time. They seed the second Year, and unless they are removed they die: About the Month of *August* plant them in very fat rich Ground, for which deep Holes are made with a setting Stick, but fill not the Holes with Earth; water them once in two Days with Water, enriched with fat Dung, and they will be very large and white: The best for Seed are planted in the same manner as *Onions*; and the Seed bearing Stalks of both must be supported by Threads or Sticks, otherwise they will lean to the Ground.

*Lettice.*

*Lettice* of all sorts seed the first Year and Die, if they are not transplanted for Winter *Lettice*, which prevents their running to Seed, and are multiplied only by Seed, which being sown in the Spring, seed in *July*; and so do the Winter, or shell *Lettices*, after having passed the Winter in the places where they were replanted in *October*; they are the most common and useful Plant in the Kitchen-Garden, e-



specially for Sallets. There are many kinds of them, as the Cabbage *Lettice*, which with the ordinary Culture comes to Perfection: The Shell *Lettice*, so called from the roundness of its Leaf, almost like a Shell, is the first that will Cabbage at the going out of the Winter; otherwise called Winter *Lettice*, because they can pretty well endure ordinary Frosts. They are sown in *September*, and in *October*, and *November*, transplanted into some Wall-border towards the South and East; or else they are sown in Hot-beds under Bells in *February* or *March*, and are good in *April* and *May*. Another sort of *Lettices*, called *Passion Lettice*, prosper well in light Ground, and are succeeded by the bright curled *Lettices*, which usually Cabbage in the Spring, and do also well upon Hot-Beds: Of this sort there are two others, *viz.* *George Lettices* that are thicker and less curled; and the *Mignon* which is the least sort, and requires good black or sandy Ground. Near about the same Season comes in curled green *Lettices*, besides the red and short *Lettices* that have small Heads, and require the same Ground. In *June* and *July* come on the Royal Bell-guards, or Fair Looks, Bright *Genoas*, *Capuchins*, &c. to whom frequent Rains are pernicious: Others are called Imperial *Lettices* from their size, delicate in taste, but apt to run into Seed. But to have no more Diversities, the great Inconveniencies that befall Cabbage *Lettices* are, that they often degenerate so far as to Cabbage no more, and therefore no Seed should be gathered but from such as do Cabbage well, and as soon as they are Cabbages they must be spent, unless you would have them run unto Seed without doing any Service: For if the rot that begins at the end of the Leaves seizes them, which it will often do when the Ground or Season is not favourable unto them, there is hardly any Remedy; only the Ground that is faulty may be mended with small Dung, whether it be sandy or cold gross Earth.

Those



Those *Lettices* which grow biggest should be placed at ten or twelve Inches distance, and for those that bear Heads of a middling size, seven or eight will do; and such as would be good Husbands may sow *Radishes* in their *Lettice* Beds, for they will be all drawn out and spent before the *Lettice* Cabbage; and for the same Reason, *Endives* being much longer before they come to Perfection than the *Lettices*, some of these last may be planted among the *Endives*. You may also blanch the largest Roman *Lettices*, when they are at their full growth, by binding of them up with Straw, or raw Hemp, or by covering of them with Earthen Pots, that have Dung put about them. They seed the first Year and Die, if they are not transplanted for Winter *Lettice*, which prevents their running to Seed.

*Lily.*

Of this Plant there are divers kinds. First, The fiery red Lily that bears many fair Flowers on an high Stalk of a fiery red at the top, but towards the bottom declining to an Orange Colour with small black Specks. Secondly, The double red Lily having Orange coloured single Flowers with little brown Specks on the sides, and sometimes but one fair double Flower. Thirdly, The yellow Lily which is the most esteemed of any, being of a fine Gold colour. Fourthly, The common White one like the common Red. Fifthly, The white Lily of *Constantinople*, smaller every way than the last, but bears a great many more Flowers. Sixthly, The double white Lily in all things like the common, except the Flowers which are constantly double, seldom opening at all but in a fair Season. Seventhly, The *Persian* Lily rooted like the Crown Imperial, beset with whitish green Leaves to the middle, and thence to the top, with many small Flowers hanging their Heads of a dead purple Colour, with a Pointil, or Chives, in the middle, tipped with yellow Pendants. These (save the last,



last, which Flowers in *May*) put forth their Flowers in *June*. All of them are increased by the Roots, which hold their Fibres, and therefore like not often removing but when there is Occasion. The best time is when the Stalks are dried down, for then the Roots have the fewest Fibres, and ought to be set five Inches deep in the Earth, and uncovered to the bottom every Year, that without stirring the Fibres of the old Roots, the young ones may be parted from them, and they only remain with new rich Earth put to them and covered; which will much advantage the fairness and number of their Flowers. See *Convul Lily*.

*Liverwort or Hepatica.*

*Liverwort or Hepatica*, are of two sorts, the single and the double: The Seeds of the single one are of use, which may be sown in *August*, in cases or well secured Beds; they must be planted in rich well dunged Soil, and are increased by parting of the Roots when grown into several Heads. Care must be taken when the Flowers have near lost their Beauty, to tie them up to a Stick, to prevent a rotting of the little Pods, before the Seed ripens, and to prevent the Seeds dropping out of them.

*Lupines.*

*Lupines* are an excellent Pulse, and require little care. They are very advantageous to any Ground they are sown on, and are a good Manure for barren Land. With us they are annually sown in Gardens for the sake of their Flowers; but in *Italy* they are sown in the Fields for Food for their Cattle; for, being sodden in Water, they are excellent Food for Oxen, and for other Cattle. There are four sorts of *Garden Lupines*; the first and most common is that with yellow Flowers, unto which that with white Flowers is very like; the other two sorts are Blew, one small, and the other large, of which the larger are esteemed the best, and afford not only good Nourishment for Cattle; but for Men also, they being esteemed



steemed very easy of Digestion, and very good for the Stomach, good Bread being made of them, mixed with Bean or Wheat Flower, the *Lupines* being first dried in an Oven. They should be kept well and dry to prevent their growing Mouldy.

M.

*Maches.*

*Maches* or *Maskets* are multiplied only by Seed, which is very small, and of an Orange Colour, they being a sort of little Sallet, which is termed wild or rustical. Beds are made for them, which are sowed about the end of *August*; they are hardy enough to resist the rigour of Frosts; and forasmuch as they produce a great many little Seeds that will easily fall, they will sufficiently propagate themselves without any other Culture than only weeding.

*Marjoram.*

Of *Marjoram* there are several sorts, which are easily raised of Seed sown in *May*; the vulgar sort and pot *Marjoram* is raised by Slips, whose uses are commonly known: There is also a distinction of Winter *Marjoram*, which is the best, and Summer *Marjoram* that lasts only that Season: It is also propagated by Slips or Suckers in *April*.

*Marygolds.*

*Marygolds* are increased by Seed, they Flower most part of Summer, and even in Winter if 'tis warm; they may be transplanted at any time in moist Weather.

*Mastick Tyme.*

*Mastick Tyme* or *Marum* is increased by Slips, but 'tis apt to be destroyed by cold.

*Affyrian Mastick* is of the same Nature, only care must be taken to preserve it from Cats by Thorns or Furs. These Masticks are best preserved by placing of them within the Earth, and covering of them.

*Masterwort.*

*Masterwort* is raised of Seeds, or Runners from the Roots.



*Maudlin.*

*Maudlin* or *Coastmary* is raised by Slips or Seeds, and Flourisheth most of the Summer Months.

*Melons.*

*Melons* or *Musk Melons*, as they are usually called from their pleasant Scent, are a Fruit raised for pleasure in the Summer-time, and distinguished by several Names: Those the most usually known are the large ribbed *Melon*, and the small round *Melon*, the Seeds being first steeped in Milk for twenty-four Hours, some propose to steep them in Wine and Sugar. They are sown in *February* at the Full of the Moon, setting two or three in a Hole about an Inch deep in a Hot-Bed, as is directed before.

Towards the end of *April* the *Melon* Plants are to be removed out of the Hot-bed, into the Beds, where they are to grow all Summer, and planted at two Foot distance; which Beds, or at least some large Holes in them, are to be filled with a rich light Mould, only you must be careful to prevent both the Roots and Plants touching of the Dung, and to water them moderately, and that only when the Earth is very dry and hot; which repeat the doing of in such Weather about two or three times in a Week; and when you water them, take care as much as possible not to wet the Leaves. If too much Rain fall, they should be covered, because either too much wet, or too much drought is prejudicial to them; the best time for removing of them is in an Evening after a fair Day, when they must be watered and defended from the Sun and Cold, for three or four Days together. If you are obliged to plant them on wet Ground, or such as is apt to hold Moisture, 'tis a good way to lay brush Faggots at the bottom of the Trench, to cause the Moisture to sink away from the Dung. If you perceive no Fruit, cut off the tops of some of the Branches to make them bear; and when the Fruit begins to appear, cut off the Blossoms that are likely to bear no Fruit: Also the small tendrings,  
the



the barren Branches, and every thing you judge may rob it of its Nourishment, and on one Plant leave not above three or four *Melons*, they should also be pegged down with Hooks, Sticks, to keep the Wind from blowing of them about, and when they are in Blossoms, heighten them up with some good warm Mould, which will prevent their falling off. They may be covered when grown large, with glass Bells, or square Cases of Glass made on purpose, which must be kept close at Night with some admision of Air under the Glass, or at the top in the Day time; the Leaves must not be wet in watering, and a Tile may be placed under each Melon that it may lie the warmer upon it, and the small Shoots that do extract the Sap of the most leading Branches must be nipt off, taking care to leave not above three or four of the most vigorous Branches, whose knots grow nearest to one another. When your Fruit is grown as big as a Tennis-Ball, nip off the Shoot at some distance beyond them, and they will grow large, provided you suffer not above two upon each Foot, chusing such as are nearest the principal Stem, the rest being of little value.

They are known to be ripe when the Stalk seems as if it would part from the Fruit, when they begin to gild and grow yellow underneath, and by the fragrant Odour they yield, which increases more as they ripen; but if they be to be carried far, it is necessary they be gathered when they begin to ripen; and when the Fruit is ripe, turn it three or four Days before you cut it, that the Sun may ripen it the better on all sides; and do not hasten their ripening too fast with Glasses. Before they be eaten, they must be put in a Bucket of cold Water, which will make them eat cool and pleasant.

The Seeds of the most early ripe ought to be prefer'd, and those Seeds that lodg'd on the Sunny side of the Melon, are to be preferr'd before the rest.



*Mint.*

*Mint* is multiplied by Runners, that are as so many Arms that spring out of its Tuft, and take Root, but chiefly by Slips. There are divers sorts, whereof the Garden Mint is the best.

It must be removed every three Years, and placed always in good Earth, at about a Foot distance: Some thick Tufts of it are likewise planted in Hot-Beds in Winter.

*Motherwort.*

*Motherwort* is raised by Seed or parting of the Roots, it Flowereth most in the Summer Months, and tho' the Stalks and Leaves perish in Winter, the Root endureth.

*Mustard.*

*Mustard* is of a hot and dry Nature, is rais'd of Seed, and will grow in any sort of dry Soil.

## N.

*Nasturces.*

*Nasturces*, commonly called Capuchin Capers, are multiply'd only by the Seed. The Leaf of it is pretty large, and the Flower of an Orange colour; the figure of the Seed is a little pyramidical, divided by Ribs, having all its Superficies engraven and wrought all over, being of a grey Colour, inclining to a light Cinnamon. They are sown in Hot-Beds about the end of *March*, or the beginning of *April*, and afterwards are replanted by some Wall. The Seed easily falls as soon as ripe, as does that of *Borage*, and therefore they must be carefully gather'd.

## O.

*Onions.*

*Onions* are sown the latter end of *February*, or beginning of *March*, and are of two sorts, the Red and the White, being rais'd of Seeds: The White is esteem'd the best, whose Roots are much in request for the several Uses they are put to in the Kitchen; they delight in a fine fat and warm Mould, and are to be sown in *March* or soon after; but if sooner, they must be

be



be at first covered. They do not extend their Fibres far downwards, and therefore at the time of sowing the Bed is to be trod and beat flat, and the Seed as equally dispersed as may be. When they spring you are to sift some fine Earth a Finger thick almost over them, and if when they begin to appear they are trod down, the Roots will grow the larger; They have prosper'd exceeding well when sown in Bay-salt, and are usually ripe in *August*, when they are to be taken up and dried in the Sun, and reserv'd in a dry place for Use. But they may be sown all the Year for the use of young Onions, or Scallions; such as are sown in Autumn, must be cover'd with Straw, or Peas-hawm, and being preserv'd all Winter, they will be early Cibouls, or Scallions in the Spring. The best Onions are such as are brought out of *Spain*, whence they of *St. Omers* had them, some of which have weigh'd eight Pounds, chuse therefore the large, round, white, and thin skinned ones.

*Orach.*

*Orach* is raised of Seed.

*P.*

*Parsley.*

*Parsley*, of all Garden Herbs, is the most universally us'd in the Kitchen, it being an excellent Ingredient in most Pottages, Sawces and Sallets. There is the common and curl'd sort multiply'd only by Seed, that is small and of a greenish grey colour, and a little bending inward on one side, and all over streak'd from one end to the other. It must be sown in the Spring pretty thick when the Frosts are over, and in good well dunged Ground that is moist, or else it should be well watered. Its Leaves when cut shoot out new ones like *Sorrel*; it can bear any moderate, but no violent Cold, and therefore it is best to bestow some covering on it to defend it: In order to its producing small Roots, it must be thinned in Beds, or Borders, where it is sown, and in hot Weather it requires pretty much watering. Its Seeds are gathered in *August* and *September*, the second Year after sown.

*Stone*



*The Art of Husbandry: Or,*

*Stone Parsley* is order'd the same way as *Alesander*.  
*Patience.*

There is an Herb called *Patience*, that is planted by sets in some Gardens; it makes a very good boiled Salad.

*Parfnips.*

This is an excellent sweet Root, and must be sown in the Spring, in a rich mellow and well ordered Soil, whose tops, when they are grown to any bigness, should be trod down, whereby the Roots will be made to grow the bigger; when you have raised them towards the Winter, they may be disposed of in Sand, to be preserv'd in the same manner as Carrots, Turneps, &c. and the fairest may be kept for Seed, or else the fairest and oldest of the tops of those Seeds may be taken in Summer and sown, whereby the fairest Roots may be attained unto.

*Pease.*

*Pease* is the chiefest of Pulse, whereof there is almost a different kind for every sort of Land and every Season; in a stiff fertile Ground they yield a considerable Crop, without such frequent Fallowings as other Grain requires, in that they destroy the Weeds, and fit the Land for after Crops, being an Improver, and not an Impoverisher of Land. Of such as are planted or sown in Gardens the Hot-spur is the speediest of any in growth, for being sown about the middle of *May*, it will in about six Weeks return dry into your Hands again; or, if sown in *February* or *March*, they will spring earlier than any sort sown before Winter. But if you sow them in *September*, and can by Fences of Reed, or otherwise defend them from extream Frosts, you may have ripe Peascods in *May* following; but the best way is to sow them so as to have them successively one after another. The next is the Sugar Pease, which being planted in *April* is ripe about *Midsummer*, its Cods are very crooked and ill shaped, being boiled with the unripe Pease in them, is extraordinary sweet; the great Inconveniency that attends them



them is, that their extraordinary sweetness makes them liable to be devoured by Birds. The large white and green Hastings are tender, and not to be set till the cold is over, and then not very thick, for they spread much and mount high, and therefore require the help of tall Sticks, the Rouncival Reading Sandwich, white and grey Tufted, or Rose Pease of two sorts grey, Windsor great Maple, great Bowling, great Blue Pease, marrow Pease, &c. besides which, there is another very large, grey and extraordinary sweet Pease that is but lately propagated, and deserves a large Bed in your Kitchen-Garden.

They delight in a warm light Soil. If it be rich, the Pease are the fairer; but if lean, they are the more early, and spend better, especially when dry; some sow them at random, as they do Corn, but that is not a good way; others set them in Ranges with a Dibble, or Setting-stick at a convenient distance, which is a very excellent way both for the saving of the Pease, and to give liberty to pass between them for the hoeing, gathering, &c. But that which is most used and best approved of, is the hoeing of them in, which makes a quick riddance of the Work, and covers all at a certain depth, and does not harden nor sadden the Ground as setting doth, but care must be taken to cover them well, when you sow them without scattering, because it will occasion the Mice to search after them; and when they are to undergo the Hazard of the Winter, they should be sowed something thicker than in Spring; if you should sow them too thick, you may, when the danger of the Frosts are over, take up those which grow too thick, and transplant them, only they must be watered a little at the first removal. If the Ground between them be kept bare, and when the Pease are about three or four Inches high, if you hoe the Earth up against them on each side; and hoe up all the Weeds, and if you lay up the Land in deep Furrows from East to West, and set your Pease on the South side of each furrow,



furrow they will ripen the sooner by the reflection of the Sun; and secure themselves much better in Winter; and if you can furnish them with Sticks to climb on they will yield a greater increase, but on the Ground they will ripen sooner.

If Pease are sown on binding Lands, their produce is very uncertain.

As for Salleting, the Pod of the Sugar Peas, when first it begins to appear with the Husks and Tendrels, affords a pretty acid Composition of Sallet, as do those of the Hops and Vine.

*Peas Everlasting.*

*Peas Everlasting* are Plants easily propagated, and in good Land thrive exceedingly. Their Roots yield yearly a great burden of excellent Provender for Horses. They must be sown early in the Spring on digged Ground in rows; and so hoed in the Intervals between the Seed; for the Seed is long in coming up, and affords no profit the first Year. They require Care and Pains to preserve them from Weeds; but the succeeding Years will recompence you abundantly: Some sow them first on a small Bed, and next Year remove them into Ground new dress'd with Plough or Spade, and plant them about twelve or eighteen Inches asunder, whereby they may be easily weeded or hoed.

*Pellitory.*

*Pellitory* of the wall is raised of Slips or Seeds which ripen in *July* and *August*; and tho' the Leaf wither in Winter, the Roots remain.

*Penny Royal.*

*Penny Royal* is of three or four sorts. 'Tis a common Plant in every Kitchen-Garden propagated from Slips or Branches set in *April*.

*Peony.*

*Peony* is a Plant of two Sexes, Male and Female; the first being single, and known by its Leaves coming constantly whole, without any Division, its Root being long and round, and the Flower of a purplish red; the



the Females many times bearing single, others double, the Leaves of all being divided on the edges, the Roots more tuberous, growing in Clods, with many round pieces fastned to them with smaller Strings. Of the best double ones there are several sorts: As First, The double Purple Peony, smaller in all its parts than the common red ones, the Leaves of a whiter green, and those of the Flower of a bright shining Colour. Secondly, The double Carnation Peony, of a bright shining Carnation Colour at the first opening, but daily waxing paler, 'till almost white; the Leaves never fall off, but wither on the Stalk. Thirdly, The double Blush, or white Peony, large Flowered, and at first opening tinged with a light Blush, but in a few Days turns perfect white, and continues so long before it decays, and then withers on the Stalk, which is the best yet come to our Knowledge. Fourthly, The double strip'd Peony, that is smaller than the last in all its parts, the Flower of a fine red, strip'd with white, lasts long, and falls no Leaf.

All these Flower in *May*, are hardy Plants, and endure long in the Ground without stirring. *October* is the only time to remove them; and of those Roots none will grow but such as have Sprouts, or Buds at the end, or rather top of them, of which sort each piece thereof will grow, the double ones some Years bring Seeds to perfection, which being sown very thin in *September*, where they may stand unremov'd in the Ground for two Years, may produce new Varieties.

*Pimpernel*: See *Burnet*.

*Pumpions*: See *Citruls*.

*Potatoes*.

*Potatoes* are planted in several parts of our Country to a very good advantage, being easily encreased by cutting the Roots into several pieces, each piece growing as well as the whole Root. A good fat rich Mould is best for them; but they will grow indifferently in any, provided 'tis well dung'd: The Root is very near the Nature of the *Jerusalem Artichok*, but not

so



so good or wholesome. These are planted either of Roots or Seeds, and may probably be propagated in great Quantities, and prove good Food for Swine.

*Purslain.*

*Purslain* is of two sorts, the green and the red or the Golden, and is raised only by Seed; to have a good Crop of which, the Plants should be replanted by the end of *May*, and set a Foot distance one from another: It is a Sallet Herb propagated with some Difficulty, being tender in the Spring, and the Frosts usually nipping of it: But to have it early, it may be sown on a Hot-Bed, or in *April* on any rich Soil finely drest; when the Seeds are sown, clap over the Bed with the back of the Spade, and water it, for it delights in moisture. If it be sown thin, or transplanted apart, it will yield fair Plants either for Seed to pickle, or to boil: As soon as the Seeds look very black, the Stalks must be gathered and laid abroad in the Sun, (which will the better mature the Seed) lay them on a Board, or Cloth to preserve them from scattering or spilling. House them in the Night, and expose them again in the Day time till they are ripe. Some have affirmed, that the Seed of three or four Years old is better than new.

R.

*Rasberries.*

*Rasberries* are of three sorts, the common wild One, the large red Garden Raspberry, which is one of the pleasantest of Fruits, and the white, which is little inferior to the red. They are propagated only by Slips that sprout out of their Stocks every Year in the Spring time, and are fit to replant the next Spring after. All of them begin to ripen about the beginning of *July*. They are planted in *March* either in Beds or Borders, observing the distance of two Foot between Plant and Plant. They shoot out during the Summer many well rooted Suckers, some of which you may take away to make new Plantations, by which means the old ones are likewise renewed,  
for



for they are dry as soon as their Fruit is gathered, therefore let not the tops be cut to a round Bush, whereby they grow so thick that they will neither bear nor ripen their Fruits so well as if they grew taller and thinner; the only Culture used to them is first in the Month of *March*, to shorten all their new Shoots which grow round about the Stock, and which ought only to be thickest and handsomest; and secondly, to pluck away all the small ones as likewise the old ones that are dead. Thirdly, just above the bearing part, a fortnight or three Weeks before they are ripe, cut them to let the Sun into them, and it will make them bear the better. They are also much infected with green Lice that spoil them; to get rid of which, sprinkle them with water, in which Lice have been dissolved. They should also be removed once in eight or ten Years.

*Radishes.*

*Radishes* are multiplied by Seed, that is round, somewhat thick, and of a Cinnamon Colour, growing in little kind of Cods. It is a very good Garden Root, of which there are three sorts; the small eating one which is raised of Seeds on a hot Bed (to have 'em early) with a sufficient thickness of good rich light Mould, that they may have depth enough to Root in before they reach the Dung, and in order to have large and clean ones, make holes as deep as your Finger about three Inches distance, into each of which a found Seed or two is to be dropped, and a little covered, leaving the rest of the Hole open, whereby they will grow to the height of the Hole before they dilate their Leaves, and yield a long transparent Root. But such of them as are sown after *Midsummer*, will not run to Seed that Year. The second is the Horse-Radish, which is encreased by Plants, or pieces of the Roots planted out, and by many made use of as an excellent wholesome Sauce. And note, that if you dig up any of the Roots for use, that you leave to the upper part that joins to the Leaves about an Inch in



length of the Root to plant again, which will grow and increase; only if 'tis dry Weather it will do well to water them, and to abate some of the Leaves in Proportion to your having lessened the Root. The last is the black Radish, which is so mean a Root as to find no place in a good Garden. Those Radishes are best that grow on brackish Lands, and are watered with brackish water.

The best Seed for Radishes, is that which produces few Leaves and a long red Root. The time of its ripening and gathering is the end of *July*, when all the Stems are cut down, and when they have been dried some Days in the Sun, the Seed is beat out and winnowed. The Stocks that run to Seed shoot their Branches so high, that it is good to pluck them off to a reasonable height, that the first Stocks may be better nourished; you may sow them all the Year, only those that are sown in Winter must be sown on Hot-Beds, which are the first Radishes that are eaten, and by that means some of them may be had during the Months of *February*, *March* and *April*. And in order to be supplied all the other Months, some must be sown among all manner of Seeds, they coming up so very quickly, that there is time to gather them before they can do harm to other Plants. The bigger Roots (so much desired) should be such as being transparent, eat short and quick without stringiness, and not too biting.

*Rampion.*

*Rampion* is a Plant whose tender Roots are eaten in the Spring, like those of Radishes, but much more nourishing.

*Reponces.*

*Reponces*, or wild Radishes, are propagated only by Seed, being a sort of little wild ones that are eaten in Sallets, and grow without any pains in the Fields.

*Rhubarb.*

*Rhubarb* is of several sorts, which are raised all by Seed, or by parting of the Tops.



*Rocamboles.* See *Shallots*.

*Rocamboles* are a sort of wild Garlick, otherwise called *Spanish Garlick*, which is multiplied both by Cloves and Seed, which latter is about the bigness of ordinary Pease.

*Rocket.*

*Rocket*, being one of the Sallet furniture, is multiplied by Seed which is extream small, and of a Cinamon or dark tanned Colour; it's sown in the Spring, the Leaf being pretty like that of Radishes; it may also be raised of Slips or Cuttings.

*Rosemary.*

*Rosemary* is small, but a very odoriferous Shrub, that is propagated by Seed, or Branches that have some share of Root, or by Slips. The principal use whereof is to perfume Chambers, and in Decoctions for Washing, being multiplied much like Rue, and other border Plants, it lasts several Years. And being planted upon dry Ground, hardly any Frost injures it. There are several sorts of it, as the broad-leaved, which is bigger than the common, and the gilded, and variously strip'd with yellow, as if gilt, the Silver denominated from its Silver colour'd Leaves, and the double flower'd *Rosemary* that has stiffer Stalks, bigger Leaves, and many pale blew double Flowers. *Rosemary, Sage, &c.* if planted in a dry Soil, seldom receive any hurt from Frosts; but if planted in a moist are usually destroyed; and 'tis the same with young tender Fruits, which a Frosty night, after a wet day, spoils more of, than ten dry Frosts.

*Rose-Tree.*

*Rose-Tree* is of divers kinds, and one of the chiefest Ornaments of our *English Garden*, but it's more particularly distinguished into four kinds. First, The red, whereof there are several sorts, as the *English red Rose*, only observe that the Flowers of some sorts are of a far deeper red than others.

The *Rose of the World*, which differs not from the former, but in the colour of its Leaves, which are of a pale Blush colour, directly spotted thro' every



Leaf of the double Flower, of the same red colour which is in the Rose, and is the most beautiful of any. The *Hungarian* Rose, whose Shoots are green, and Flowers of a paler red Colour, as are those of the red *Provence* Rose, whose Branches and Leaves are bigger and greener than those of the common red Rose; the red *Belgick* Rose that is much Taller than the common dwarf Red, or Gilliflower Rose, which grows lower than the ordinary Rose, whose Flowers are of a pleasant Carnation colour. The double Velvet Rose that hath young Shoots of a sad reddish green Colour, with few or no Thorns thereon; it seldom bears any store of Roses. The Marbled Rose, much like the last in growth, but its Leaves are larger, of a light red Colour marbled and veined. The Rose without Thorns, that has green and smoother Shoots and Leaves than the Marble one, without any Thorns at all, and the Flowers of a pale red, spreading their Leaves. The *Frankfort* Rose, that hath strong reddish Shoots full of Thorns, thick Flowers, and the Button under the Rose bigger than ordinary. Secondly, The Damask, or pale coloured Rose, whereof the common Damask Rose is the ancient Inhabitant of *England*, and well known without describing. The Party coloured Damask Rose, *York* and *Lancaster*, only differing from the other in its parted and marked Flowers. The Chrystal Rose, like the last, only the Marks of the Flowers are much fairer and better than those of the other. The Elegant variegated *Danish* Rose has shorter and reddish Shoots than the former, Leaves smaller, and Flowers something double. The Damask *Provence* Rose, whose Shoots and Leaves are longer than any of the rest, and of a reddish green with very large Roses. The Monthly Rose bearing Flowers only three Months in *England*, viz. *June*, *August* and *September*. The Blush *Belgick* Rose that hath larger Branches, and is fuller of Thorns than any of the former, the Flowers growing very thick, sweet-scented, and the Water distilled therefrom is almost  
as



as good as that of the Damask. Thirdly, The yellow Rose, whereof the single Yellow Rose grows as high as the Damask, and whose young Shoots are full of small hairy Prickles of dark red Leaves, small, and Flowers single, and pale yellow. The Scarlet Rose of *Austria*, like unto the other, only the inside of the Leaves of the Flowers is a fine Scarlet, and the outside of a pale Brimstone Colour. The double yellow Rose, whose Shoots are small, and not so red as those of the single kind; the Flowers contain very many small pale yellow Leaves with a great Thrum in the middle. Fourthly, The White Rose, whereof the common one is well known; but there are two sorts thereof, the one being much doubler and fairer than the other. The Blush Rose that differs nothing from the other, but in the Colour of the Flowers, that at first opening are of a fine pleasant Blush Colour, and then grow somewhat white. The double Musk Rose that rises high with many green Branches, and dark green shining Leaves armed with great sharp Thorns, the Flowers come forth together in a Tuft not very double; but there is another of the kind that beareth single Roses, the scent of both Flowers is sweet like Musk. The Damask Rose, or the white Cinnamon Rose grows not so high as the last, but the Leaves are larger and of a whiter green, and the Flowers bigger, whiter and more double, but not quite so sweet. The double Dog Rose, that is in Leaves and Branches like the lesser White Rose. The Ever-green Rose, that grows like wild Eglantine, whose Leaves fall not away in Winter, as those of other Roses, from whence it took its Name; and Flowers containing but five Leaves of a pure white Colour, stand four or five together at the end of the Branches. The Spanish Musk Rose, that hath great green Branches, and bigger green Leaves than the last, and single Flowers. The great Apple Rose, that hath a great Stock, and reddish Branches with green sharp Thorns, and single small Flowers



standing on prickly Buttons. The double Eglantine, whose Flowers are double made up of two or three rows of Leaves of a pretty red Colour.

But of all these varieties of Roses, the best and most esteemed amongst the Red, are those called the Rose of the World, the Red Belgick, the Red Marble, the Rose without Thorns, and the Red Provence Rose. Among the Damask are the Chrystal Rose, the Elegant variegated Danish Rose, the Blush Belgick, the Monthly and the Damask Provence Rose. The Scarlet *Austrian*, and double Yellow among the Yellow Roses; and of the White Roses, the Blush and Damask Musk Rose.

Now Roses are increased either by inoculating the Bud of them in other Shoots, or by laying down the Branches in the Earth; the best Stocks to inoculate upon, which must be done about *Midsummer*, are the Damask, the White, the *Frankfort*, and wild Eglantine: Care must be had that all Stocks of budded Roses be kept from Suckers, and the Buds to be inoculated as near the Ground as may be, that the budded Launce may be laid in the Earth to Root after one Year's growth. You may likewise prick many Holes with an Awl about a Joint that will lie in the Earth, and then cover the same with good Mould; this do in the Spring, and peg it down that it rise not again, and if water'd now and then in dry Seasons, it will be so rooted by Autumn, as to be removed and cut from its other part behind the Root, and becomes a natural Tree; one whereof is more valuable, than two of the other that are only budded, or grafted, because very many Suckers that come from them will be of the same kind. But all Roses being apt to yield Suckers, the fairest way to increase them is gently to bend down part of the Tree, or the whole in the Spring, to lay all the Branches in the Ground, and to apply unto them old and well rotted Dung about the Places where they are laid, which will make them root the sooner, and by Autumn there will be thereby



as many rooted Trees of the same kind as Branches, laid in the Earth, without prejudice to the old one, which when the new ones are cut off, may be easily reduced to its place again, and the next Year bear as plentifully as ever: Neither will it prevent the bearing of Flowers, for the laid Branches will be as plentifully stor'd, as if the Tree were erect, and not laid; so that neither the profit nor pleasure of that Year is lost thereby; they will also grow of Suckers, if they be never so little rooted.

The double yellow Roses bear not so well when planted in the Sun, as other Roses, but must be placed in the shade; and for its better bearing, and having of the fairest Flowers, first, in the Stock of a *Frankfort* Rose, put in the Bud of a single yellow Rose near the Ground, that will quickly shoot a good length; put into it a Bud of double yellow Rose of the best kind at about a Foot higher in that Sprout; keep Suckers from the Root, as in all other inoculated Roses, and rub off all Buds but of the desired kind. When big enough to bear, prune it very near the preceding Winter, cutting off all the small Shoots, only leaving the bigger, whose tops are also to be cut off as far as they are small. When it Buds for Leaves in the Spring, rub off the smallest of them; and when for Flowers, if too many, let the smallest be wiped off, leaving as many of the fairest as you think the strength of the Tree may bring to Perfection, which should be a Standard, and rather shaded than planted in too much heat of the Sun, and watered sometimes in dry Weather, whereby fair and beautiful Flowers may be expected.

Shearing off the Buds when they are put forth, for the retarding of the blowing of Roses is practicable enough; and a second shearing of them may cause them to be still later, and so Roses may be had when no other Flowers are in being; but then care must be taken that the whole Tree be served so: For if one part of it be only sheared, the part unsheared will spend



that Strength and Sap which you expected would have put forth new Buds in the places of those cut off, and frustrate your design. Monthly Roses, if you would have them bear in Winter, should be set in a Tub that they may be removed into the Conservatory.

As soon as the Roses have done blowing, they must be cut with Shears pretty close to the Wood, and each Branch ought to be cut again with the pruning Knife near the Spring, and that close to the Leaf; Bud, and all that is superfluous take away to bring the Tree into a handsome Form; they are hardy, and endure the severest Winters well enough; and they may be dispersed up and down the Garden in Bushes, or to the Walls among the Fruit; or else set in Rows and Hedges, intermixing the several Colours in such a manner as to have no two alike. The well placing of them much advances their Prospect to the Eye. None of the Rose Trees should be left to grow too high; lower than a Yard and half in height is best; except the Musk Roses which will not bear well, except against a Wall, Pale or House-side, and must be suffered to grow eight or nine Foot, which is their usual height.

*Rue.*

*Rue* is multiplied by Seed that is of a black Colour and rugged, but 'tis usually propagated rather by its Layers and Slips than by its Seed. It makes pretty Borders for Flowers, being kept clipt.

*S.*

*Sage.*

*Sage*, whereof there are several sorts, the red, green, small and variegated; but the first is the best, and the young Leaves thereof a very wholesome Sallet in the Spring. It is commonly a Border Plant, whose Culture hath nothing particular; it is like that of other Border Plants, as Rosemary, Lavender, Wormwood, &c. It is raised by setting the Slips and Branches in the beginning of *April*. The tender tops of the Leaves, but especially the Flowers, should be sparingly



sparingly cropp'd, yet so as not to suffer it to be too predominant.

*Salsifie.*

*Salsifie*, or Goats-beard. The common sort is multiply'd only by Seed, which is of a very long oval Figure, as if it were so many Cods all over streak'd, and as it were engraven in the Spaces between the Streaks, which are pretty sharp-pointed towards the end.

*Spanish Salsifie.*

*Spanish Salsifie*, or *Scorzonera*, is multiply'd by Seed as well as the other, and is very good boil'd, both for the pleasure of the Taste, and the health of the Body. It is sown in *March*, and must be sown very thin, whether it be in Beds or Borders, or else at least it must be thinned afterwards, that the Roots may grow the bigger. It runs up to Seed in *June* and *July*, and is gathered as soon as it is ripe; it may also be rais'd of Slips, or by cutting of the Roots into small pieces, and planting of them in *March* or at other times; they are said to lie in the Ground all the Winter without any prejudice, and still to grow bigger and bigger, tho' they yearly run to Seed.

*Samphire.*

*Samphire* is one of our Sallet furniture that is multiply'd only by Seed, it should be planted by the sides of a Wall, expos'd to the South or East. The open Air and great Colds are pernicious to it. It's usually sown in some Pot or Tub fill'd with Mould, or else on some side Bank towards the South or East, and that in *March* or *April*, and afterwards transplanted into those Places above-mentioned; but the *French* Seed is better than our *English*.

*Savory.*

*Savory*, Winter and Summer, the latter being annual, and rais'd of Seed; the other living over many Winters, and increas'd by Slips as well as Seed: They are both, as to the uses of them, well known  
in



in the Kitchen, more particularly the Leaves are us'd to some Ragou's, and among Pease and Beans.

*Scallions* : See *Ciboules*.

*Scurvy-grass*.

*Scurvy-grass* is rais'd of Seed. That of the Garden, but especially that of the Sea is a sharp biting and hot Herb of Nature, like unto *Nasturtium*, prevalent in the Scurvy, whereof a few of the tender Leaves may be admitted into our Composition of Sallet.

*Selery*.

*Selery* is only multiply'd by Seed, which is of a yellowish and longish oval Figure, and a little bunch'd; it is not good but at the end of Autumn and Winter Season. It is first sown in Hot-Beds the beginning of *April*, and because of the extreme smallness of its Seed, you cannot help sowing it too thick, so that without thinning of it seasonably before it be transplanted, it warps and flags its Head too much, and grows weak, shooting its Leaves outward in a straggling manner. In the transplanting of it, the Plants are to be plac'd two or three Inches one from another, for which we make holes in the Nursery Bed with our Fingers; only what comes from the first sowing, is transplanted the beginning of *June*, about which time the second sowing is sow'd, which is in open Beds at a Foot distance, and the same must be thin cropped and transplanted as the other, but more must be planted the second time than the first. The transplanting of them in hollow Beds is good only in dry Ground; so the second way of transplanting them is in plain Beds, not made hollow, but both must be extremely water'd in Summer, which contributes to make them tender; and in order to whiten the same, begin at first to tie the *Selery* with two Bands when 'tis big enough in dry Weather, then Earth it quite up with Earth taken from the high rais'd Pathways, or else cover it all over with long dry Dung, or dry Leaves, and this whitens it in three Weeks or a Month; but because when it is whiten'd it rots as it

stands,



stands, if not presently eaten, it is not to be so earthed up, or cover'd with Dung, but in such Proportion as you are able to spend it out of hand; hard Frosts quite spoil it, and therefore upon the approach thereof, it must be quite cover'd over; in order to which, after it is tied up with two or three Bands, it is taken up with the Earth at the beginning of Winter, planted in another Bed, and the Plants set as close to one another as may be, which will make them require much less covering than before when more asunder. To raise Seeds from them, some Plants must be transplanted into some by-place after Winter is past, which will not fail to run to Seed in *August*. There is but one sort of this Plant. The tender Leaves of the blanch'd Stalk do very well in our Sallets, as likewise the Slices of the white Stems, which being crimp and short, and first peel'd and slit longwise, or eaten with Oil, Vinegar, Salt and Pepper, and for its high and grateful Taste is ever plac'd in the middle of the grand Sallet at great Men's Tables. Have a care of a small red Worm that is often lurking in these Stalks.

*Sives.*

*Sives* are a diminutive kind of Leek, they are increased by parting and planting of them in single heads early in the Spring; if planted in good Land, they will multiply exceedingly.

*Skirrets.*

*Skirrets* are a sort of Roots propagated by Seed, they require a rich Soil inclining to moisture rather than drought, they should be sown very thin amongst other things in *February* or *March*, but the surest way is to set them of Slips; being parted as single as may be. If you set them too thick, or above one Slip in a place, they will starve one another; they being also apt to canker, they require fresh Earth often.

*Smallage.*

Some use this Herb in their Pottage. Its rais'd either by Slips or Seed, which is reddish, and pretty big,



big, of a roundish oval Figure, a little more full and rising on one side than the other, and streaked from one end to the other.

*Snap-Dragon.*

*Snap-Dragon*, *Antirrhinum* has some pretty diversities. First, the white *Snap-Dragon* very common. Secondly, The white variegated one like the other, but broader leav'd, divided in the middle and turn'd up on the edges, with many small long purplish Lines on the inside. Thirdly, The red, which is of two or three sorts, the best flowered like the former of a deep red *Rose Colour*, but the other paler. Fourthly, The yellow distinguish'd only from the common white in the yellow Colour of its Flowers, they Flower from *May* to *July*, and the Seeds are ripe in *August*, they being all rais'd from Seed, bear Flowers the second Year, when the old Roots commonly perish; yet the Slips being taken off and set, will grow the best, being those that do not rise to Flower, and the best time of setting them is the end of *May*, or the beginning of *June*.

*Solomon's Seal.*

*Solomon's Seal* is sometimes rais'd of Seed, but most commonly by the Tops or pieces of Roots; the Seed is ripe in *September*.

*Sorrel.*

*Sorrel*, of these are several sorts, of which the *French Sorrel* is the best; but of the common sort the largest is best for the Garden, and serves for many Uses in the Kitchen, being rais'd easily enough from Plants, which should not be set too near, the same being apt to grow large and spread abroad; but the usual way of propagating it, is by Seed, which is small, slick, and of a Triangular Figure, sharp-pointed at the end, and of a dark Cinnamon Colour. It may be sown (of whatsoever sort it be) in *March*, *April*, *May*, *June*, *July* and *August*, and the beginning of *September*, provided sufficient time be allow'd it to grow big enough to resist the vigour of the Winter,  
it's



it's sown either in open Ground or else in straight Rows or Furrows, in Beds or Borders; in all which cases it must be sown very thick, because many of its Plants perish; the Ground it requires should be naturally good or well improved with Dung; it must be kept clean from Weeds, well watered, and once a Year covered with a little Mould after it's first cut down to the Ground. The Mould serves to give it new Vigour, and the Seasons most proper for applying it are the hot Months of the Year.

Its Seed is gathered in *July*, by which it is propagated, tho' that called round Sorrel from the roundness of its Leaves (those of the other sort being sharp pointed) is multiplied by running Branches that take Root in the Earth as they run over it, which being taken off and transplanted produce thick Tufts, and these also other Runners.

*Spinage.*

*Spinage* is an excellent Herb crude, or boiled, being multiplied by Seed only, that is pretty big, horned and triangular on two sides, having its corners very sharp pointed and prickly; and on that part which is opposite to those pointed Horns, it is like a Purse of a greenish Colour. This Plant requires the best Ground, and is planted either in open Ground, or in Furrows, straight Rows upon well prepared Beds, and this several times in the Year, beginning about the middle of *August*, and finishing about a Month after; the first is fit to cut about the midst of *October*, the second in *Lent*, and the last in *May*. They may be also sown early in the Spring. Those that remain after Winter run up to Seed towards the end of *May*, and are gathered about the midst of the Month following. They must be well ordered; and if the Autumn prove very dry, it will not be amiss to water them sometimes. They are never transplanted.

*Squashes.*



*Squashes.*

*Squashes* are a small sort of *Pumpkin* lately brought into request, they are ordered like *Pumpkins* or *Cucumbers*.

*Strawberries.*

*Strawberries* deserve a place in the Orchard or Garden, being humble and content with the shades and droppings of the more lofty Trees. There are various kinds of them, as the common *English Strawberry*, much improved by being transplanted from the Woods to the Garden, the white Wood *Strawberry* more delicate than the former, the long red *Strawberry*, the *Polonian*, and the green *Strawberry*, which is the sweetest of all, and latest ripe. But some esteem that the best of all which hath not long since been brought from *New England*: It is the earliest ripe of all *English* Fruit, being ripe many Years, the first Week in *May*. They are of the best Scarlet Dye, and are propagated of Runners, which is a kind of Thread or String which grows out of the Body of the Plant, which easily takes Root at the Points or Knobs, and in two or three Months time are fit to transplant; but the best to plant are those that shoot first in Spring. They are planted either in Beds or Borders, and should be well watered. They thrive best in a moist Soil, or new broke up fresh Ground, or in such places as they have not grown in before, especially on the sides of Melon Banks, where the heat of the Sun is convenient to nourish them; the time of planting them is in *May*, or *September*, in moist Weather. They bear well the Year after they are planted, especially if planted in single Rows, and thrive much better than if planted thick together according to the common way. But if you would have *Strawberries* in Autumn, the first Blossoms which they put forth may be cut away, and their bearing hindred in the Spring, which will make them afterwards blow a-new, and bear in their latter Seasons; and in order to get some of these of a larger Size,



as soon as they have done bearing let them be cut down to the Ground, and cropt as soon as they spire, 'till towards the Spring: And when you would have them proceed towards bearing, now and then as you cut them, strew the Powder of dried Cow-dung, Pigeons-dung, Sheeps-dung, or fresh Mould, &c. upon them, and water them when there is occasion. Such as are red, thoroughly ripe, large, and of a pleasant Odour, are the best, being agreeable to the Taste; they extinguish the heat and sharpness of the Blood, by refreshing the Liver. They should be stringed once in two or three Years, and transplanted once in three or four Years. To preserve them over the Winter, and cause them to come early, cover them from the Frosts with a little Straw, and bestow some new Mould on them.

*Succory*: See *Endive*.

*Sweet Marjoram*.

*Sweet Marjoram* is something tender, and therefore if you would have it betimes, you must raise it on a Hot-Bed, and in a warm Situation, sowing of it in a warm dry Season; for if Moisture comes at the Seed before it has lain some time in the Ground it will turn to a Jelly, and never grow; it will do the same if sown in a moist Soil.

T.

*Tabacco*.

*Tabacco* is raised of Seed, which must be sowed in a good warm Soil sheltered from the Winds, in which you sow the Seeds, mixing of them with Ashes, that they may the more equally be sown: When they begin to appear, they lay Boughs and other things over them, to shelter them; and while they are growing, they prepare another place to remove the Plants into, where they plant them two or three Foot distant; but with us, in these cold Countries, they must be sown in a Hot-Bed. 'Tis fit to remove when it puts forth four or five Leaves. When it comes up, it must be carefully watched from the Caterpillars;



Caterpillars; and once a Month the Weeds howed up that are about it: When the stock is got to a due Heighth, it must be cut, except what you design for Seed. When it loses any thing of its verdure, begins to bow down, or is come to a strong Scent, 'tis ripe, and when 'tis cut, they dry it in a House upon Poles; it must be often visited, and not hang too thick. The Roots left in the Ground produce another Crop, but not so good as the first; Mr. *Worlidge* says, it Tans Leather as well as Oak-bark.

*Tansie.*

*Tansie* is raised by Seeds, Slips, or parting of the Roots; a Herb hot and cleansing, but in regard of its domineering Relish, must be sparingly used with our cold Sallets.

*Tarragon.*

*Tarragon* is one of the perfuming, or spicy Furnitures of our Sallets, being propagated both by Seeds and rooted Slips, and by setting of the tops which spring again several times after they are cut. It endures the Winter, and requires but little watering in the driest of Summers. When planted in Beds, it requires eight or nine Inches distance for each Plant one from another, and the best time for it is in *March* or *April*, which hinders not, but that it may be transplanted again in the Summer Season. The best for use, is that which is fresh and tender, and not the Leaves which hang on the Ground, but the Tops are to be preferred.

*Thistle Carduus*: See *Carduus*.

*Thyme.*

*Thyme* is of several sorts which are multiplied by Seed, that is very small, and those Plants or Stems of it that produce several rooted Slips and Suckers are separated to replant into Borders, for *Thyme* is seldom planted otherwise; a Border of it is a considerable and necessary Ornament in a Kitchen-Garden.



*Trip Madam.*

*Trip Madam* is propagated of Seeds, Cuttings, or Slips; 'tis used in Salads in Spring, while it is young and tender.

*Turneps.*

*Turneps* are of several sorts, as the round which is the most common, the long otherwise called narrow, and the yellow. These are usually nourished in Gardens, and are properly Garden Plants; yet they are very advantageous being sown in Fields, not only for culinary Uses, but for Food for Cattle, as Cows, Swine, and of late Years, Sheep. They delight in a warm, mellow, light Ground, rather sandy than otherwise, not coveting a rich Mould. The Land must be finely plowed and harrowed, and the Seed sowed and raked with a Bush (as I have shewed already.) They are sown at two Seasons of the Year; in the Spring with other like Kitchen Trade, and also about *Midsummer* and after. Cows and Swine will eat them raw, if they are introduced into the Diet, by giving the *Turneps* first boiled, then only scalded, and last of all raw. It is a piece of great neglect amongst us, that the sowing of them is not more prosecuted, seeing the Land need not be very rich, and that they may be sown as a second Crop also, especially after early Pease. They supply the great want of Fodder that is usual in Winter, not only for fatning Beasts, Swine, &c. but also for Milch-Cows.

The Season for sowing this Plant for the Kitchen, is about *Midsummer*, that they may be ready to improve upon the Autumnal Rains, which makes them much sweeter than the Vernal, yet you may sow in *April* to have *Turneps* in the Summer; the shallower you sow *Turneps*, *Onions*, or any of those sorts of Roots that go but a little way into the Ground, the larger they will be. They must not be sown too thick, for that will hinder the growth of the Root; but if the over-fatness of the Ground, which is a very



great fault for *Turneps*, or over-much wet causes them to run out into Leaf more than in Root, then treading down the Leaves will make them Root the better. And if the Roots of them are useful and palatable, the Greens or Leaves of such as have been sown late, and lived over the Winter are so too. They being frequently boiled and eaten with salt Meats, prove an excellent Condiment.

*Turneps* in Winter, before the great Frost prevents, may be taken up, and cutting off the green Tops, you may dispose of them in some cool place in Heaps, and they will keep a long time, but the best way to keep them is to cover them with Sand.

## V

*Valerian.*

*Valerian* is of several sorts, and is raised of Seeds or Slips, the Seeds should be kept moist, and sown in *March* and *April*. It flowers in *March* and *April*, and most of the Summer Months.

*Violets.*

*Violet* Plants, as well the double as single sort, and of what Colour soever they be, though they produce Seed in little reddish Shells or Husks, yet they are multiplied only by Slips, each Plant or Stock of them growing insensibly into a Tuft that is divided into several little ones; which being replanted, grow in time big enough to be likewise divided into others. The double *Violets* more particularly serve to make pretty Borders in our Kitchen-Gardens, their Flowers placed on the superficies of Spring-Sallets making a very agreeable Figure.

## W.

*Winter-Cherries.*

*Winter Cherries* are increased from the Roots by Sprouts or Runners.

*Wormwood.*

*Wormwood* is multiplied by Seed that is of a pretty odd Figure, as being a little bent inward in its small



left part, and on the other end which is bigger and rounder, a little open, and upon which last end there is a little black spot. Its Colour is yellowish at the bigger end, and its sharper end inclines to black: Its Seed is seldom used, because it is difficult to fan, it being very little; and therefore when there is occasion of propagating *Wormwood*, its Cuttings, that are a little Rooted, are rather made use of. It's planted on Borders or Edges, in a Line, at two or three Inches distance, and five or six deep in the Ground. It is good to flip them every Spring, to renew them every two Years, and to take away their oldest and decayed Stocks. The Seed is gathered about *August*.

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## C H A P. II.

**H**AVING given an Account of the several Herbs, Plants, &c. belonging to the Kitchen-Garden, I shall, before I proceed to the Description of the Orchard and Fruit-trees, take Notice of several sorts of Flower-trees, Winter-greens, and other Shrubs, that will bear the Frost, which are both convenient and ornamental for the making of Hedges, Walks, and the Partitions of the several Quarters of Gardens, Orchards, &c. whose shelter is of great Advantage to preserve your Gardens warm, as well as to afford a pleasant Prospect to the Eye; I shall observe the same Method with that of the Kitchen-Garden, and begin with

A.

*Acacia.*

The *French* do mightily adorn their Walks with the *Virginian Acacia*: It endures all sharp Seasons but high Winds; which, because of its brittle Nature it does not well resist. The Roots which run like Li-



quorice under Ground, are apt to emaciate the Soil, and therefore not fit for Gardens. It is increased by Suckers.

*Alaternus.*

The *Alaternus* thrives very well in *England*, and bears the severest Frost. It makes fine Hedges, and is a quick grower; the Seed ripens in *August*, the Blossoms of which afford an early Relief to the Bees: And the *Phyllyrea*, of which there are five or six sorts, are still more hardy, both which are raised of their own Seeds or Layers, only the *Phyllyrea* lies long in the Ground, and the *Alaternus* comes up in a Month after it is sowed. Being transplanted for Hedges or Standards, they are to be governed by the Shears, and transplanted at two Years growth; clip them in Spring after Rain, before they grow sticky, while the Shoots are tender; thus it forms a fine Hedge planted in single Rows at two Foot distance, of a Yard thick, and twenty Foot high if you think fit, and furnished with Branches to the bottom: Only because of the Winds, it may be necessary to support it with some Wall or Frame, if you let it grow to such a height.

*Almond dwarf.*

*Almond dwarf* is a very humble Shrub, bearing in *April* many fine Peach coloured Blossoms. 'Tis a very pleasant Plant, and yields plenty of Cions.

*Althæa Fruticosa.*

*Althæa Fruticosa*, or *Shrub-Mallow*, of which there are two sorts, the Purple and the White. They endure the Winter, and are usually planted Standards: They bring forth their Flowers in *August* and *September*, and last 'till the Wet or Cold spoils them; the Tree is increased by Layers, and may also be raised by Seed, which must be sown in *February*, and kept well watered after they come up; they may be transplanted the second Year, and will blow the fourth; they are very subject to be over-run with Moss, which should be rubbed off.



*Arbutus.*

*Arbutus*, or *Strawberry Tree*, grows common in *Ireland*. It is difficult to be raised from the Seeds, but may be propagated by Layers. It grows to a goodly Tree, endures our Climate, unless the Weather be very severe, and makes beautiful Hedges.

B.

*Bucks-horn Tree.*

*Bucks-horn Tree*, or *Virginian Sumach*, grows in some places six Foot high, the young Branches being of a reddish Brown, feeling like Velvet, and yielding Milk if cut or broken. The Leaves are sniped about the Edges, and at the end of the Branches come forth long thick and brown Tufts, made of soft and woolly Thrums, among which appear many small Flowers: The Roots put forth many Suckers, whereby it is increased.

*Bays.*

*Bays* are of several sorts, and are propagated of Suckers, Layers and Seeds, or Berries, which should be dropping ripe e'er gathered. *Pliny* orders the Berries to be gathered in *February*, and spread 'till their Sweet be over, and then to be put in Dung and sown. Some steep them in Wine, but Water does as well; others wash the Seeds from their Mucilage by breaking and bruising the glutinous Berries: But the best way is to inter them as you furrow Pease, or rather to set them a-part. Defend them the first two Years from piercing Winds. This aromattick Tree loves the shade, but thrives best in hottest Gravel, on which Soil it best endures the Frost; but if it is any way injured, cut it down to the Ground, and it will recover again, or else it will die. Having passed the first Difficulties, culture about the Roots wonderfully augments its growth. They sometimes grow thirty Foot high, and two in Diameter: They are fit both for Arbours and Pallisado Work, if the Gardiner understands when to prune and keep them from growing too woody: The Berries are emol-



lient, and sovereign in Distempers of the Nerves, they are used in Cholicks, Gargarisms, Bathes, Salves, Perfumes; and some use the Leaves instead of Cloves.

## C.

*Celestins.*

*Celestins* or *Staff Tree*, bears green Leaves all the Winter, and does well to mix with *Pyracantha* for making of Ever-green Hedges; 'tis raised of Seeds or Layers, and is best removed in *March* or *April*.

There are *Cherry Trees*, *Peach Trees*, and also *Apple* and *Pear Trees*, which bear double Blossoms.

*Cistus.*

*Cistus*, there are two sorts of it: *First*, The small, which is a shrubby Plant, about a Yard high, with two Leaves at every Joint, and Flowers coming forth at the end of the Branches three or four together, like a single Row, of a fine reddish Purple, with many yellow Threads in the middle, which are succeeded by round hairy Heads, containing small brown Seeds. *Secondly*, The *Gum Cistus* that rises higher, and spreads more than the former, and is bedewed all over with a clammy Moisture, which artificially taken off, is the black sweet Gum called *Laudanum*. Its Flowers are larger than those of the former. They are Plants which continue flowering from *May* to *September*, and are raised from Seeds: But being not able to endure Cold, they must be housed in Winter.

*Cornel Cherry-Tree.*

*Cornel Chéry-Tree* grows to a good height, in any sort of Ground, and may be raised both of the Seed and Slips.

## F.

*Filberts.*

*Filberts* are raised of the Nuts set in the Ground, or Suckers from the old Roots, or they may be grafted



grafted on the common Hazle-nut: They delight in a fine, light, mellow Ground, but will grow almost on any Soil, especially if defended from cold Winds. 'Tis of two sorts, the *White* and the *Red*. There is also another kind, called the *Filbirt of Constantinople*, the Leaves and Fruit whereof are bigger than either of the former; the best of them are those with a thin Shell.

G.

*Gelder-rose.*

*Gelder-rose* is increased by Suckers or Cuttings, being hardy, and what will grow almost in any Soil that is not too dry.

*Granade.*

*Granade*, there are three sorts of them: They differ little in Culture from the *Alaternus*: Considerable Hedges may be raised of them in Southern Aspects: Their Flowers are a glorious Recompence for our Pains in pruning them. They must be diligently purged of their Wood. If you plant them in Gardens to the best Advantage, keep them to one Stem, and enrich the Mould with Hogs-dung well rotted. Plant them in a warm corner to have Flowers. If you plant them in Hedge-rows, loosen the Earth at the Roots, and enrich it Spring and Autumn, leaving but a few woody Branches. At the Transplantation of them they should be well watered.

H.

*Hypericum Frutex.*

*Hypericum Frutex* is a Shrub yielding abundance of small slender Shoots, which in *May* are very thick set with small white Blossoms, that the Tree seems to be all over hoary with Frost, or covered with Snow. It is increased by Suckers, and endures all Weathers.

I.

*Jessamine.*

*Jessamine*, there are several sorts of this Plant: First, The white *Jessamine*, that hath divers flexible Branches proceeding from the bigger Boughs that



come from the Root ; at the end of white young Branches come forth divers Flowers together in a Tuft, opening into fine white pointed Leaves, and of a strong sweet Scent, which fall away with us without Seeding: *Secondly*, The *Catalonian* or *Spanish Jessamine*, that is not so high as the former, but bigger in Branches and Leaves as well as Flowers, which are white when opened, with blushed Edges, and sweeter than those of the former. *Thirdly*, the double *Spanish Jessamine*, its Flowers white like the first, but bigger and double, and consisting of two rows of Leaves that are sweet as the former. *Fourthly*, the yellow *Jessamine*, which upon long Stalks bears small long hollow Flowers, ends in five, and sometimes six yellow Leaves, and are succeeded by black shining Berries. *Fifthly*, the *Indian Scarlet Jessamine*, whose Branches are so flexible as not to be able to sustain themselves without the help of something to support them. The Flowers come forth many together at the end of the Branches, being long like a Fox-glove, opening at the end into five fair broad Leaves, with a Stile in the middle of a Saffron colour. The *Jessamine* Flowers from *July* to the middle of *August*, the first white and common yellow being hardy, and able to endure our Winter and Colds, are increased by Suckers; but the *Indian* yellow, or *Spanish*, must be planted in Boxes or Pots, that they may be housed in Winter: They are usually increased by being grafted late in the Spring on the common white *Jessamine* by approach; but they may be also propagated by Layers or Suckers.

*Jucca Indian.*

*Jucca Indian* is increased by parting of the Roots, it must be secured in Winter from the Frosts.

*Judas Tree.*

The *Judas Tree* yields a fine purplish, bright, red Blossom in the Spring, and is increased by Layers or Suckers.



L.

*Laurus Tinus.*

*Laurus Tinus* is a Shrub yielding sweet-scented Tufts of white Blossoms in the Winter, as well as Summer, is easily propagated from Suckers or Layers, and makes a fine Hedge; but if 'tis injured by Frosts, cut it down to the Ground, and it will recover again.

*Lentisc.*

*Lentisc* is a beautiful ever-green, thrives abroad with us with a little Care and Shelter; it may be propagated by Suckers and Layers; it makes the best Tooth-pickers in the World, and the Mastick or Gum is of excellent use, especially for the Teeth and Gums.

*Lilac.*

*Lilac*, or *Pipe-Tree*, which affords fine scented Flowers in *April* or *May*, and is a Tree yielding plenty of Suckers, by which 'tis propagated; or it may be increased by Slips put into the Ground in *March*, before the Sap begins to be in Motion.

M.

*Maternus.*

*Maternus* is a hardy Shrub, being something of the Species of the *Phillyrea*, and doth as well for Hedges, being as easily managed.

*Mezereon.*

*Mezereon*, or *Dwarf-bay*, rises according to its Age from one to two, three, or four Foot high in a Bush full of Branches with whitish round pointed Leaves, that appear not till the Flowers are past, which are of a pale Peach colour, some others near red, and a third milk-white, and sweet-scented; they are succeeded by small Berries, when ripe of a delicate red: The Berries and Seeds are to be sown in good light Earth in Boxes, as soon as they are ripe, or else such Earth laid under these fine Shrubs for the Seed as they ripen to fall into, and afterwards covered with the same Mould, not too thick.

*Myrtles.*



*Myrtles.*

Of *Myrtles*, there is the broad leaf *Myrtle*, and the narrow leaf *Myrtle*, both very sweet smelling Shrubs; but the best is that which in Autumn affords plenty of double white Blossoms. They are not so tender, but small Defence will make them endure hard Winters. The Plants produced from Layers, are the most hardy; those from Seeds most tender. The same thing may be observed of most odoriferous Herbs, as *Thyme*, *Marjorum*, *Hyssop*, &c. There is a sort of *Myrtle* with a large Leaf, called *Spanish Myrtle*, that will endure all Weathers, without Shelter; but the hardiest sort of *Myrtle* of the other kind is that which comes from *Carolina* and *Virginia*; the Berries of which being boiled, yield a sweet or pinguid Substance, of a green Colour, which being scummed off, they make Candles of, which give not only a clear Light, but a very agreeable Scent; it thrives best near the Sea, and is raised of Seeds or Layers. They should not be planted too close together, because it will make them mouldy, nor in too moist a place; the best transplanting of them is in Spring, that they may have time to get Root in Summer, to supply the Tree with Sap sufficient to support it in Winter, which is, what is necessary to be observed about all Winter greens. *Myrtles* must be well watered both Winter and Summer, or they will not shoot well.

## N.

*Night shade Tree.*

*Night shade Tree* rises with a wooden Stem, a yard high, green leaved, and has Star-like Flowers, white with a yellow Pointel in the middle, succeeded by small green Leaves of a fine red, in *December*, wherein are small white flat Seeds. It endures the Winter, and is raised by sowing of the Seeds in *March*, which are apt to come up and grow, especially if sown in a Pot, and housed in Winter.



O.

*Oleander.*

*Oleander* or *Rosebay* is a Plant bearing some of them bluish, and some of them white Flowers, and will prosper if secured from the most violent Cold. This Tree is commonly kept in Pots or Tubs, it blows all Summer, and when in Flower can hardly be watered too much. 'Tis increased by flitting of the Twigs in the place where you would have them take Root, and laying of them in the Ground, and keeping of them indifferent moist, and they will Root easily. They are also increased by Suckers that have Roots to them, they may be planted out in Summer, and taken up, and put into Pots again towards Winter to preserve them; and this will make them strong, the double sort are for the most part kept in Glass Cases.

P.

*Periploca.*

*Periploca*, or *Peridoca*, is a Plant that twists it self about a Pole like a Hop, and lives over the Winter, and yearly puts forth small blue Blossoms. 'Tis increased by Layers.

*Phyllyrea.*

*Phyllyrea* makes an excellent Hedge, and bears clipping into any Form, especially if supported by a Wall or Frame: There are five or six sorts of it (some of which are variegated.) 'Tis raised of Layers or Seeds which lie long in the Ground before they come up, and sometimes by Slips. The young Plants may best be removed at two Years old, in *March* or *April*, which may be clipped after Rain in Spring, before it grows sticky, and while the Shoots are tender. Thus it will form a fine Hedge, (though planted but in single Rows, at two Foot distance) a Yard in thickness, and twenty Foot high. It will not well bear removing 'till the coldest Seasons are over.

*Privett.*



## The Art of Husbandry: Or,

### *Privett.*

*Privett* is a Plant that hath been in request for adorning Walks and Arbours; but is of late difused.

### *Pyracantha.*

*Pyracantha*, this Tree deserves a principal place among those used for Fences, it yielding a very strong and firm prickly Branch, and ever-green Leaves. But it thrives best in Standards, because with often clipping it is apt to grow sticky. It is quick of growth, and raised either of the bright *Coralline-Berries*, which hang for the most part of the Winter on the Trees, and lie as long in the Ground e'er they spring as the *Haw-thorn-berries*; or else it is raised of Suckers or Slips.

### S.

### *Sabin.*

*Sabin* or *Savin* will make fine Hedges, and may be brought into any sort of Form by clipping, much beyond any of the sorts of Trees commonly made use of for that purpose, especially such as are designed not to grow of any Stature or Bulk, being easily increased by Layers, Cuttings, or Seeds.

### *Sena Tree.*

*Sena-Tree* is of two sorts, the *Bastard Sena*, and the *Scorpion Sena*, both which yield a pleasant Leaf and Flower: They grow but slender, and so need the support of a Wall or Pales; but being tonfile, they may be reduced to any other Form; and may be raised by Layers or Seeds.

### *Southernwood.*

*Southernwood* is raised of Slips, planted any time in Winter.

### *Spanish Broom.*

*Spanish Broom* is not much unlike the yellow *Jessamine*, only the Flowers are larger. It flowers in *May*, and is increased by Seeds or Suckers.

### *Spirea Frutex.*

*Spirea Frutex* is a small Tree bearing small Peach-coloured Blossoms about *August*. 'Tis a hardy Tree, and is increased by Layers.

Stone-



*Stone-crop Tree.*

The greater *Stone-crop Tree* is a beautiful green, but not common; 'tis raised of Layers.

*Sweet Bryer.*

*Sweet Bryer*, that which bears a double Blossom is much the best, it makes very good Hedges, and will bear clipping: 'Tis easily raised by Layers, Slips, or Cuttings.

T.

*Tamarisk.*

*Tamarisk* is a Tree that grows tall and great, being increased by Suckers and Layers, and usually planted by those who respect Variety and Pleasure. Its Wood is also medicinal.

*Tamarisk* is a Tree grows to a considerable Heighth, which for its aptness to be shorn, and governed like the *Savin* and *Cyprus*, may be reckoned worth propagating; as also for its Physical Virtues: And though in some part of Winter it loses its Verdure, yet it quickly recovers it again; it may be raised of Layers or Slips.

V.

*Virginian Climber.*

*Virginian Climber*, or *Maracæ*, comes out of the Ground in *May* with long round winding Stalks, more or less, and in Heighth according to the Age. From the Joints come the Leaves, and at each one, from the middle to the top, a Clasper like a Vine, and a Flower; also the Leaves are of a whitish Colour, having towards the bottom a Ring of a perfect Peach colour, and above and beneath it a white Circle; but the stronger part is the Umbrane, which rises in the middle, parting it self into four or five crooked spotted Horns, from the midst whereof rises another roundish Head that carries three Nails or Bars, biggest above, and small at the lower end. It bears Fruit like a Pomegranate. Its beautiful Flowers shew themselves in *August*, the Stalk dying to the Ground every Winter, springing again from the Roots in *May*,  
which



which should be covered and defended from hard Frosts in Winter. It should be planted in a large Pot, to hinder the Roots from running; and for housing in Winter, and setting in the hot Sun in Summer, it must have the hottest place that may be, or it will not bear at all. The Pots may be set in the Spring in Hot-Beds to bring them forwards.

*Double Virgins Bower.*

*Double Virgins Bower* is a climbing Tree, fit to cover some place of Repose, or to be supported by Props for that purpose; it bears many dark, blue, double Flowers in *July* or *August*, and 'till the Cold prevents them. You may cut off most of the smallest Branches in Winter; it shoots early, and spreads very much in a Summer, and is easily increased by Layers: There are of them single, both Purple and Red; but the double is most esteemed.

W.

*Woodbine, or Honey suckle.*

*Honey-suckles* bears a fine Flower, especially those of the double red sort, and may be brought to cover Arbours, or to adorn other parts of the Orchard, being to be clipped into any Form, and are easily raised of Layers.

Y

*Yucca.*

*Yucca* is an *American* Plant, but hardier than we take it to be: It will suffer our sharpest Winter without setting in Cases. When it comes to some Age it bears a Flower of admirable Beauty; and being easily multiplied, might make one of the best and most ornamental Fences in the World for Gardens.

Most sort of Fruit Trees, as *Apples, Cherries, Codlings, Plumbs, &c.* make good Hedges, and afford a good Shelter, being planted to divide Gardens, Orchards, &c.



*Of such Plants as least endure the Cold.*

**T**Here being several Plants exotick to our Climate, which are brought out of hotter Countries, and are therefore too tender to indure our Colds: I shall, before I treat of them, describe to you the Green house or Winter Conservatory to preserve them in.

*Green-Houses* are of late built as Ornaments to Gardens, as well as to preserve tender Plants; they ought to be open to the South, or very little declining to the East or West; the heighth or breadth about twelve Foot, and the length according to the number of Plants you intend for it. It must by no means be plaister'd within with Lime and Hair, for dampness is observ'd to continue longer on such Plaister, than on Bricks or Wainscot. One part of it may have Trils made under the Floor to convey warmth from the Stoves made on the back side of the House, the better to preserve it from Cold or Dampness: This way of preserving for the most tender Plants, being thought much better, than Fire hung up or plac'd in holes on the Floor, as hath been practic'd; tho' in very hard Weather that way may be practic'd in other parts of the House. The Charcoals that are used in Pans, must be well burnt before they are put into the Houses. Coals of Wood Fires, or of Ovens, will serve very well: Some use Glass-doors, Casements, or Chases; but Canvas-doors are reckon'd best; Whatever it be, they are to be plac'd at such distance from the Wainscot-doors, that Mats may be set up before them in extream hard Weather. If Canvas-doors be used, they may be made to take off, and put on at pleasure.

But the cheapest sort of *Green-house* is to dig in dry Ground that is not annoyed with any Spring or soak of Water; as for a Cellar or Vault, about six foot deep, ten foot broad, and of such length as is necessary  
to



to contain the Plants to be repositied therein: Wall up the sides with Brick, and at one end of the whole breadth make a pair of Stairs, the better to carry large Boxes or Cases up and down between them; but if a Crain be used, a Ladder will do. The Cover must be made of Feather-edged Boards, in the Nature of several Doors with Hinges fixed thereon, to be put on Hooks fastned in a piece of Timber, lying on the North-side, raised a Foot or more higher than the South-side, that by a little shelving the Cover may the better carry off the Rain, and let there be a Joist put between every pair of Doors for them to rest on; and unto the South-end or Fore-part of each Door a Rope or two must be fastened, and a Frame of two Rails on the North-side of the Conservatory, that the Ropes may be drawn over that one Rail to raise the Doors, and be fastned to the other Rail, when the Door is at the necessary Height. Whereby as the Season is, the Doors may be raised and stand at what height you please, and as few or as many may be opened, to admit the Air or Sun-beams as are necessary.

Fern or some other kind of Straw, in very sharp Weather, may be laid on the Top of the Boards, to prevent the Winds piercing through. Range your Pots and Cases, so as they may readily have the benefit both of the Sun and Air, and do not place them so near as to touch one another; neither water them often, because 'tis apt to make them fading and sickly; but when you find a necessity for it, by the curling and withering of the Leaves, warm the Water, and mix a little Pigeons and Hen's-Dung with it, pouring it on moderately, and at some distance from the Roots, that it may leisurely soak to them. Take off such Leaves as wither and grow dry, and open the Mould about your Plants, sprinkling a little fresh Mould on them, and upon the Top of that some warm Dung; and if any Weeds grow, root them up.

*Amomum Plinii*, so called, being a Plant by him esteemed, and by him reported to be naturally growing



ing in divers Parts of *Asia*, yielding a rich costly Berry used in Perfumes. This Plant is now nursed up in our Climate, by carefully preserving of it in Winter, in close Conservatories, where it requires the same care as the *Orange*.

*Citron* must be carefully planted. It always bears Fruit, some falling, some ripe, and some unripe. There are several kinds of them. The *Leaf* is like the *Bay-leaf*, except only that Prickles grow amongst them. The *Fruit* is yellow, wrinkled without, of a sweet Smell, and sour Taste : The *Kernels* are like the Kernels of a Pear. The *Tree* is planted four manner of ways ; of the *Kernel*, the *Scion*, the *Branch*, and of the *Stock* : If you will set the Kernel, you must dig the Earth two Foot every way, and mingle it with Ashes : Let your Beds be short with Gutters on every side to drain off the Water. Set three Kernels together with the Tops downwards ; and being covered, water them every Day ; and when they spring, set them in good mellow Earth, and water them every fourth or fifth Day ; and when they begin to grow, remove them again in the Spring to a gentle moist Ground, for they delight in a moist Soil. If you set the Branch, you must not set it above a Foot and a half deep, lest it rot : It must be well sheltered from the North. It delighteth to be often dug about. They are grafted in hot Countries, in *April* ; and in cold, in *May* ; not under the Bark, but cleaving to the Stock near the Root. They may be grafted both on the *Pear* and *Mulberry* ; but when they are grafted, they must be fenced either with a weather Basket, or some earthen Vessel. Such Fruit as you mean to keep should be gathered in the Night with the Branches to them. If the Fruit grow too thick, they should be thinned, which would make the Remainder the larger.

*Date-tree* delights in a moist Gravel. They seldom bear with us, and are only planted for a Rarity. 'Tis raised of Stones which must be planted in Trenches



ches a Cubit deep and broad, and the Trench filled up again with any Dung but Goat's-dung. In the midst set your Stones, so as the sharper part stand upwards, upon which sprinkle a little Salt, and cover them with Earth well mingled with Dung; and every Day till they appear, water them; they may be removed when a Year old; but as they delight in Salt, every Year the Ground should be dressed with it.

The Sets are not presently to be put into the Ground, but first to be set in Earthen-pots, and when they have taken root, to be removed.

*Limon-Trees* are to be ordered the same way as the *Orange-Tree*.

*Orange-Tree.* These Trees preserved in strong Boxes may with ease be removed into the Conservatory, and thence in Summer placed in several places of the Garden, especially if the Boxes are set upon Wheels. They are raised of the Kernels sown in *March*, in cases of rich Earth. These Fruits were unknown in former Ages to the *Europeans*, and the Trees have not been long introduced; and not many Years has that more noble Kind, the *China Orange*, been propagated in *Portugal* and *Spain*, which annually furnisheth us with their Fruits; yet there they have in a few Years degenerated as to Size and Taste. The Fruit with us tho' it ripen not so well as in *Spain*, yet they serve for many Physical Uses, and the Flowers here are more valuable than the Fruit. They may be planted against a South-wall, where they must be well defended on all sides from the cold Winds, and the Top well secured from Rain, and against such a Wall they may stand without removing; only in Spring you must let the Sun and Air in to them by degrees, till they are left quite open, so as to have only the main stay standing till next Winter. In the Building of the Wall you may contrive Cavities through which the Heat of the Fire made in several places for that purpose may pass behind your Trees; or you may have other Fires in this Shed, as in a  
green



green House. The most proper Earth to plant your *Orange-Tree* in, is that which is taken out of a *Melon* or *Cucumber-bed*, and equally mixed or tempered with a fine loamy Earth, and so to remain all the Winter to be sifted into the Cases. Instead of the Earth of a *Melon* or *Cucumber-bed*, you may use *Neats-dung*, and order it as the *Melon* Earth. Before you put your Earth into the Cases, lay on the bottom a good quantity of *Osier* or *Withy-sticks*, or such like, which will make it light; if they are in a small quantity mixed throughout, it will be the better. Place them in the green House before any Frost happen, and in hard Weather give them some warmth; and as the Spring appears, so acquaint them by degrees with the Air, opening of the Doors at Noon first, and shutting of them again, and so by degrees, till you can leave them open all Day. The same Discretion must be used at the setting of them into the Conservatory, that you do not shut them up too close, until Extremity of Weather require it. As the Trees grow large you may enlarge your Cases, and take out the Trees, Earth and all, and place them in new Cases. I know a Gentleman who annually makes a Shed or House over his *Orange-Tree*, and as the Tree encreaseth, he enlargeth his House, and his Trees are very large, and bear very well. You must gather the Flowers as they blow, leaving but few to knot into Fruit, that your Tree may not spend it self too much. You must carefully brush the Spiders-webs off this Tree, for they delight to work on them, because of the fragrant Blossoms attracting of the Flies. The *Kernels* may be planted in Hot-Beds, and will produce fair Plants the sooner; moderate Heat will serve until the Frosts are very hard; then must you kindle greater Fires, but let not any Fire come too near your Trees, nor any Smoak annoy them. When you water them do it gently, and when 'tis needful, which may be discerned by the Leaf which will soon complain; give them rather too little than too much,



and wet not the Leaves. Renew and alter the Earth as tenderly as you can, by abating the upper-part of it, and stirring of it up with a Fork, taking great Care not to hurt the Roots, and applying the prepared Earth in the room of it; which may be done in *May* and *September*. If you kindle any Charcoal, when they have done smoaking, put them into a Hole sunk a little into the Floor; about the middle of it is the best Stove, and least annoys the Plants. The Water wherewith you water them ought to be prepared as well as the Earth: You may therefore mix it with *Sheeps* or *Neats-dung*, and let it stand two or three Days in the open Air or Sun; and it will be fit for use.

*Guinea Pepper* has some of it a long, and some a round Fruit, 'tis sowed every Year, and therefore you must let the forwardest Pods grow 'till ripe for Seed, though others are pickled for Sauce; they must be sown early, and great Care taken to keep them from the Frosts by sowing of them in a Hot-bed, and afterwards transplanting of them into a Bed of good Earth.

*Pomegranate*. The double blossomed *Pomegranate* Tree, is esteemed the rarest of all flowering Trees; they may be planted against a warm Wall, being tender while young; but afterwards are very hardy. They flower in *August*, if they are pruned, they grow up high; otherwise they grow into a thick Bush, full of small Branches, which should be thinned: But to have them bear well in *England*, they must be planted in a Box or Case made of Wood, that they may be housed in Winter, and in Spring the young Sprouts cut off, that it spend not it self too much in Wood. 'Tis best to keep it to a few or but one Branch. The Ground should be well enriched with Hogs-dung, for 'tis the plenty of Nourishment that makes them apt to Blossom; if you do not house them, if you think your Wall stands too open to the Wind, you may place a Mat to screen them. They  
are



are easily propagated by Layers or Suckers. They love both a hot Ground and a warm Air, and may be grafted on their own Stock or Scion, that grow from the Roots of the old Tree; they should be often watered with water in which Hogs-dung has been infused, and it will make them bear.



B O O K XIV.

Chap. I. *Of Gardening.*



Have already given an Account of the Orchard and Kitchen-Garden, and shall next proceed to the Garden of Pleasure or Flower-Garden; without which not only Courts and Palaces are very imperfect, but even the more retired Habitations are very much wanting in one of the most material Parts of them.

How much Gardens have been admired by the Ancients: What Expences and Charges the *Romans* and others have been at about them: What Variety of Delights and pleasant Prospects they have been made to afford, when laid out so as to improve all the Advantages of Nature and Art; where the Groves, Avenues, and Walks are noble and free, the Fruits, Flowers, and Herbs ranged in due order, and every thing made to conspire together to delight the Senses, being what is too numerous to particularize, and what can be better manifested by Experience and Observation, than indicated by an imperfect Pen; and there-



therefore I shall choose rather to refer the Reader to his own Observation, with only this Caution, to suit things to the Circumstances of the place, the charge of making and maintaining of it, and the quantity of Land designed for this purpose.

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## Chap. II. *Of the Situation of the Flower-Garden.*

**O**F the Kitchen-Garden and Orchard, I have already given you an Account, and how 'tis to be managed and brought into Order; which being made fit for Trees and Herbs, cannot be improper for Flowers or other Rarities; but as your Garden is a necessary concomitant to your Habitation, from which, if 'tis remote, it can neither be pleasant nor useful; so if 'tis upon a barren Soil (which is commonly the wholsomest for your House) the more Charge and Labour must be bestowed upon it to make things thrive, which one would not chuse, except it be for the Advantage of some pleasant Grove, Prospect, or the Enjoyment of a good Air; and though Woods and Water are two of the best Ornaments of an Habitation, and what may be had in most places, together with a good Air, yet you will seldom meet with Water and a good Prospect near each other.

But if your Place and Situation is fixed, you must do as you can, and improve the Soil you have to the best Advantage, by considering the Nature, Product, Advantages, and Disadvantages of it.

If your Soil be dry and warm, a plain flat place is best for a Garden; but if it be cold and moist, then a declining or shelving piece of Ground that lies towards the Sun is best, because you can the better drain off the Water; and upon such Land Trees will thrive exceedingly, besides such Lands commonly afford good Prospects, and no form for a Garden can  
be



be pleasanter than the having of one Degree of it above another.

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Chap. III. *Of several Sorts of Soil for a Garden.*

**A** Deep rich black Mould is the best for all sorts of Garden-ware, if it is warm and easy to dig, and is the most fruitful, especially if well dunged and trenched in Winter.

Chalky-Land is very sweet, and what it produces has a good Taste. 'Tis very agreeable Land to most Plants that are not too tender, it being cold in Winter, and backward in Summer, but it may be easily corrected, and made suitable to all sorts of Plants and Trees, which commonly bear well upon it, especially when you have a good Depth of Mould before you come at it.

Marle is a very good Mixture for Garden Ground, being much of the Nature of Chalk.

Sandy-Land is very warm and forward, and agrees very well with most sorts of Fruits and Flowers where the Land is not too sandy, where 'tis, it will require a constant supply of proper Soils to enrich it, and so will Gravel Soils.

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Chap. IV. *Of the Improvement of Garden Ground.*

**T**HE black Mould, which is the best for this use, is commonly found in Bottoms, or near Rivers, or great Towns and Villages, where they have a great deal of Dung, Ashes, &c. to be constantly mending of it with, or else where 'tis made Earth it will in time degenerate into a red-brick Earth, as may be seen in most of the Fields about *London*.

Clay-Lands being cold and stiff, are to be mended by Labour, and a Mixture of a contrary Nature, as



has been shewed before. If you dig them often, the Sun, Rain, and Frosts will mellow them, so as to cause them to shelder into Dust; these Lands retain Manure the best of any, but they must be well drained; and tho' Chalk and Marle sweeten them at first, yet in time they unite with the Clay, and are soon converted into its own Nature.

Chalky-Lands usually yield good rich Surface where 'tis any thing deep; but their Surface being commonly shallow, you must take care to plant on them as shallow as you can, and where you can sink your Walks, the Earth that comes out of them will help to raise your Borders, and add to the thickness of your Soil, which will be a great Improvement of this or any other sort of Land that has but a shallow Soil; and as Chalky-Lands are cold and binding, warm Applications, and such things as may loosen their binding Qualities, are the best Manure for them: For Chalk, being of a heavy binding Nature, makes a very great Improvement of light hot dry Grounds, especially having suffered a Calcination.

Lands seated on Marle are commonly very rich, altho' cold and heavy; and you need not doubt of the Depth of the Soil, and the more you turn it up and expose it to the Air, the better it converts into good Earth, and any light warm Mixture is of great Advantage to it.

Sandy-Lands are of several sorts, as I have shewed already; but Land that hath a competent Mixture of Sand in it is the warmest and lightest, and according to its fatness is the best to produce Vegetables. Sandy and gravelly Grounds need a more constant supply of Manure than other Lands, as I said before; but they yield a good increase in moist Summers, or where they may be well manured with Dung: Cow-dung, Sheeps-dung, and Hogs-dung are the best.

Where you have any Trees, Plants or Flowers that delight in a different Soil, from what your Garden is composed of, your best way is in such places to  
make



make a Mixture of some such sort of Soil with the natural Earth, as your Plants delight in.

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Chap. V. *Of the Form of Gardens.*

AS to the Form, I reckon that the best, that will allow of the most Uniformity and Regularity, and bring to view at once the greatest Variety the place will afford, which I think the Square, or rather the long square Figure will do the best; because in that Form your Walks will be straight, and your Trees and Plants stand every way in a direct Line. But where you are already limited, by reason of the Situation of your House, and other Boundaries, things must be formed and modelled according to such Limitations as are prescribed to you.

You should also observe to have one principal Walk in the middle of your Garden, which is to lead from one of the principal or most frequented Rooms of your House, and if possible you should cause it to terminate in the best Prospect your Situation will afford; and because of its affording of a Prospect do not make it too narrow, which is the fault of most Walks that I have seen; for the broader they are the more noble (especially where they have a length that will bear it) and to such Prospects let not your Inclosure bound your Sight, but rather leave it open with some thin Pallisadoes, or Iron-work.

If your House stand on the side of a Hill; if you must make your Garden either above or below it, chuse rather to make it below than above, because the Land below will be the richest, and best watered; and because you may have a Prospect of it from every Room of your House; besides 'tis much better to descend into a Garden, than to ascend.



*Chap. VI. Of Fences and Inclosures of Gardens.*

**O**UR being obliged in these cold Countries to have Walls for to ripen and shelter our Fruit, is a great prejudice to the Pleasantness of our Gardens; for in the hotter Climates where they do not need Walls to ripen their Fruit, their Gardens lie all open, where Prospects may be had, and Water-fences can be made; or else they bound their Gardens with Groves in which are Walks, Fountains, &c. which are much pleasanter to bound the Eye with, than a dead Wall: But Walks being necessary with us for Fruit, as well as to secure our Plantations, I shall begin with Brick-walls, as the warmest and best for Fruit, of the price of which I have already given an Account. Those Walls which are built Pannel-wise, with square Pillars at equal distance, save a great deal of Bricks in being thinner than other Walls, and look much handsomer, which Pannels may be only made on one side, or on both, as you think fit.

Next unto Brick, Stone-walls are preferred, especially the square Hewen-stone. The Rough alone is very dry and warm, but its unevenness is inconvenient to nail Trees to, unless you here and there lay some Timber to nail them to.

All Walls must be well coaped, especially those of Stone, lest the wet get into them, which will quickly destroy them. I shall not mention any thing of Pales, because I have already given an Account of the Charge of cleft Pales; and as for sawn Pales they are as dear, considering their lasting, as Brick or Stone; except where the one is very dear, and the other very cheap; besides they are too low for Fruit.

And for Earth-walls I shall not persuade any Body to make them. I think Pallisadoes the best Fence, where any thing of a Prospect is to be had, as I said before, and one of the cheapest if made the common way, and most ornamental, though you may bestow  
great



great charge on them, or may make them of Iron, which affords the best Prospect; or you may have wooden Bars set in the same Form, which are very handsome and lasting.

Quick Fences are also very fine, especially if kept well clipped; the best of which sort is the *Holly*, concerning the raising of which I have already treated.

For parting of inward Gardens, or Quarters; Codlins, Cherries, Plumbs, Quinces, &c. are very handsom, kept clipped; and so are Hedges of *Piracanthus*, &c.

Walks and Partitions may be made also of all sorts of Winter-greens, which may be planted about a Yard distance one from another; and you may plant one Plant of Laurel, and another of Yew; the one being light Green and a broad Leaf, and the other a dark Green and a narrow Leaf: If these are clipped square till they come to join each other in a Hedge. they will make a fine Chequer-work. There are also several other Winter-greens that may be thus mixed that will make very fine Walks.

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Chap. VII. *Of several sorts of Walks.*

THE Design of Gardens being for Recreation and Pleasure, they ought to be accommodated for all Weather, and be suited with such Walks and Places of Retirement, as may suit all Seasons, and all Occasions; that so when our Lassitude, the Rain or the scorching Beams of the Sun, render the open Walks unpleasant, we may have a Retirement till we are willing to repeat our Progress.

The best Walks in Winter wet Seasons are reckoned those paved with broad Stones; but such Stones being very apt to break and moulder with the Frost, I think gravel Walks much better where they are made of a good binding Gravel that will not poach; which if you find them to do, mix a good quantity of  
of



of Sand with it, and it will make it solid and firm, and make it the more beautiful. The loosest biggest grained Sand you can get is best for this purpose. Some grind or beat Sea-shells, and therewith add a thin Coat on the Gravel, which by constant rolling incorporates with the Gravel, and prevents its sticking to ones Shoes. Others make use of refuse Bricks, which they pulverize and strew on their Walks, which gives them a fine Colour and dries up the Moisture. Others pulverize Smith's Cinders, which are of a very drying Quality, Gravel-walks are also best for Fruit-Trees, because the Beams or Rays of the Sun reflect from them against the Walls.

The great Inconvenience those Walks are subject to, are Weeds and Moisture. To prevent the Weeds, you must when you first make them, dig the Earth away deep where you design to lay the Gravel; if 'tis Clay-Land, or a Soil apt to produce Weeds, you should dig it the deeper, and lay your Gravel the thicker. Some pave their Walks all over with large Pibbles or Flint-stones, and lay their Gravel on the Top of them, the coarser Gravel underneath, and the finest on the Top: You must keep them well rolled, especially as soon after Rain as the Top will be dry enough not to stick to the Roller, which will make them bind; and if they grow mossy or discoloured, you may stir them with a Spade as deep as the finest Gravel lies, and the watering of your Walks with the Brine your Meat is salted with, or which is better, with the Liquor the Salters call Bitterne, is very good to kill the Worms and Ants ( which are commonly very pernicious to Walks ) and also the Weeds.

And as for Moisture, especially after Frost, which loosening of the Gravel, causes long soaking Rains to make it stick and hang to ones Feet: The best cure of which, is to lay your Walks very round, and to make good Drains where you find the Water to settle.

Walks of Grass are much to be preferred in Summer, and in dry Weather, which may be made either  
by



by laying of them with Turf, or by raking of them fine, and level, and sowing of them with Hay-feed, and keeping of them well rolled, and weeding of them of the larger sort of Weeds; the often mowing of them will make the Grass fine. If these Walks prove moist you may lay them a little rounding, which will make them cast off the Water the better; and also after they are grazed, cover them with fine Gravel or Sand, which will dry up the Moisture on the Top of them, and make the Grass finer in a little time, than it was before, when once the Stones or Sand is sunk into the Ground; but 'till they are, which they will be some time a doing, they will be but uneven and rough; however, if you lay them on against Winter and roll them often, the Stones will quickly settle, so as you may be able to mow the Grass, tho' not so short as it ought to be at the first: A Water-Table also on each side of the Walk is very good to drain your Walks, and to keep your Grass and Weeds from mixing with your Borders, and make your Walks the handsomer, and better to the Eye: These Water-tables should be new cut once or twice a Year, and be cut straight by a Line.

Terrase-walks are very pleasant and useful, and also beneficial for the Air, especially where they raise you up to a Prospect, and where you have a great deal of spare Earth, or Rubbish, which would else cost a great deal to remove to another place, as where Water is near, and you make Canals or Ponds, &c. On the out-side may be a Wall to support it, or on both sides, or the inside to the Garden may be made declining and cloathed with Turf, and may be set with Pallisadoes, or with a clipt Hedge.

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#### Chap. VIII. *Of Arbours, Summer-Houses, &c.*

**A**Rbours have been much more in use than at present, because their Seats are apt to be moist and wet, and so unwholesome to sit on; and therefore

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I rather prefer cover'd Seats or shady Walks, which are warm in Winter, as well as shady in Summer: The best Tree to plant, for Arbours, is the Hornbeam, as I have said before; and for covered Seats they may be placed so as to face each Coast, that you may according as the Wind or Sun are, place your self so, as to be defended from them.

Summer-Houses may also be erected at each Corner, and made so as to let in the Air on all sides, or to exclude it, as you find it refreshing, or inconvenient by having of Windows, or Doors placed accordingly.

### Chap. IX. *Of Water.*

**A** Good Soil may produce all sorts of Plants proper for the Garden or Orchard, and they may be so ranged as to make it pleasant and delightful; but a Garden cannot be said to be compleat nor convenient without Water; not only for the pleasure that Ponds, Rivers, and Fountains afford, but also for the Necessity of having of Water at hand on all occasions, especially in dry parching Times; which Defect where Water is not at hand, may be supplied by Springs rising at a Distance, especially where they rise any thing higher than the place you want to have the Water conveyed to, and may be brought in Pipes of Elm, which if laid deep are not so liable to break with the Frosts, as Leaden or Earthen-pipes are.

Earthen-pipes may do well in some places: They are made about three Foot long, and to fit one into another; the Joints of which may be closed with a Cement of Lime, Linseed-Oil, and Cotton-wooll; but these Pipes are not to force Water in any height, they being apt to break, but to convey Water by a Descent; they are cheap and lasting.



Though small Streams and Springs are ornamental, and necessary for watering your Garden, and supplying of your Fountains; yet large Streams, Ponds, or Canals, are more noble and pleasant, especially if made of regular Forms, and their sides even and level with Rows of Trees, or Groves on the side of them, or near them.

Fountains are also a great Ornament to Gardens, being much more esteemed in *Italy* and *France*, than here: There they bestow very great Costs and Charges on them, and make them in very great Variety of Forms, some being made round, others square, and some oval, and some are flat at the bottom, others rounding like a *Bason*, some being made of Brick, others of Stone, or Lead, and adorned with Variety of Figures, from which by Pipes they cast Water from several Parts of them, according to the Contrivance of the Workman: From which, waste Pipes must be laid to carry off the waste Water, and to clear them; which Water running into lower Parts of the Garden, may be made use of for Cascades, and other Water-works.

But in dry places where neither Springs nor Rivers can be obtained, Water may be procured for necessary occasions from the Heavens, by preserving the Drips of the Houses, the Water of the declining Walks, and the Water-shoots of other adjacent Lands, which may be reserved in Cisterns or Ponds so as to be of use, and to add to the Ornament of the Garden.

Statues, Obelisks, Dials, and other Ornaments, are of use to adorn Gardens with, as they are a lasting Ornament for all Seasons of the Year, when vegetable Ornaments are out of Season, and afford good Variety to the Eye, especially if placed in Fountains, Ponds, or Groves, where they seem more surprizing than in open places.





## B O O K XV.



## Chap. I. Of Flowers.



HAVING given you an Account of the Site, Form, and other Ornaments of a Garden: I shall proceed to what remains for the beautifying of it, which is Flowers; concerning which I shall observe the same Alphabetical Order, that I have already done about Flower Trees, and Kitchen-Garden Herbs.

A.

*African Marygolds.*

*African Marygolds* are of three sorts, and are raised of Seed sown in *April*, by some, in a Hot-Bed; but they will in a seasonable Spring thrive well enough without. The Seed should be saved of the largest Flowers, only as they are a Flower that blow late, as in *August* and *September*, so the more Care must be taken of them, they being a Plant to be renewed every Year; they require much Sun, and a light Mould, and when new sown, they should be watered.

*Amaranth.*

*Amaranth* Flowers gentle, or Princes Feathers, are of great Variety; but the principal are, 1. The great purple Flower with a thick tall Stalk, and many Branches, large green Leaves, and long Spikes of round



round hairy Tufts, of a reddish Purple, containing many small white Seeds, of which there are many kinds. 2. The lesser purple Flower with the yellow Leaves, a little reddish, broad at the Stock, sharp pointed, the Stock branched at Top, and bearing long, soft, and gentle hairy Tufts of a deep shining murry Purple. The Seeds are small, black, and shining. 3. The Flower of divers Colours, which differ little either in Leaves, Stalks, or Seed, only that the Flowers are deeper or lighter coloured of Purple Scarlet, or Gold Colour. The Soil wherein they should be sowed must be light and rich; the Seeds should be sown about the middle of *March* in a Hot-bed, and when grown to any Strength, be removed into another new Bed, and taking of them up with Earth about them, they set them about the beginning of *May*, where they may bear Flowers, which by this means they will the sooner do, and also ripen their Seed the better. The Seed will grow, though it be two or three Years old, which you may sow, except you desire them forward without a Hot-bed.

*Anemonies.*

*Anemonies*, or *Wind Flowers*, are distinguished into those with broad and hard Leaves, and those with narrow and soft ones; of both which sorts there are great Variety of Colours, some being double, and others single Flowered.

They must be set in a rich Mould, wherewith Neats-dung and Lime should be mingled, that has lain together some time to rot: And the place should be rather shady, than have too much of the Sun.

The broad leaved *Anemone* Roots should be planted about the end of *September*, and the small Eminences which put forth the Leaves be set uppermost. Those with small Leaves must be set after the same manner, but not at the same time; for being tender Plants, they must not be put into the Ground 'till the end of *October* at soonest, for fear they should come up



too early, and the Frosts destroy them, from which they should be defended with Mats, Tyles, Pease-straw, &c. which once in two Days at farthest, when fair Weather will allow of it, must be taken off for an Hour, or so. If the Spring prove dry, they will require often and gentle watering. They must not be taken up 'till *July*, if they prosper well; but if their Leaves are few, Flowers small, and Stalks short, 'tis a sign that they like not the Soil: And therefore in this Case they should be taken up as soon as the green Leaves turn yellow, before they are quite dry, and be put into Sand in some dry place for a Month, they being washed clean and laid on a heap to dry, and then taken out, and kept in Papers in some dry, but cold place, 'till the time of their Planting.

As to the raising new Varieties of them, some double broad leaved ones bear Seed, as the Orange-tawny, which will soon yield Variety. To sow the Seeds, take one or more of the best coloured Flowers, and keep them a Year without Planting, and after that, plant them again, and when the Seed is ripe or near it, cover it with Glasses, or any thing that may prevent the Winds blowing of it away when ripe; gather it when the Wind is in the South, dry the Seed in a Chamber, and lay it where it may not Mould, sow it in *March* or later, steeping of it first six Hours in some Wine and Water, which pour off, and dry the Seed, that it may not stick together; sow it in a Box filled with Horse-dung and Earth mixed together, the Seed must not be sowed above half an Inch deep. The Seeds of these Flowers are commonly fit to gather in *May*, earlier or later as they Flower, which must be done as soon as ripe and not before, which is known by the Seed with its Woolliness, beginning a little to rise of its self at the lower-end of the Head, at which time it must be gathered and laid to dry, a Week or more, and then in a Bason or Earthen Vessel, rubbed with a little Sand or dry Earth



Earth gently, to separate the Seed from the Wooll or Down that encompasses it. When your Seeds come up, take care to prevent their being scorched with the Sun, when you see the Leaves begin to grow dry. Leave them the first Year in the Box they were sown in, and preserve them from the Frosts, but let them have as much Air as you can, especially in Spring; and if they stand too dry, water them a little, and the second Year take them up in a dry Season, and then lay them in a dry place 'till *September*, and the next Year keep them all the Year out of the Ground, and then plant them in good Earth mixed with Horse-dung that it may be light, plant them about an Inch deep in the Ground, and strew over them some rotten Horse-dung about the same thickness.

*Apples of Love.*

*Apples of Love*, of which there are three sorts, the most common having long trailing Branches with rough Leaves and yellow Joints, succeeded by Apples (as they are called) at the Joints, not round, but bunched, of a pale Orange shining Pulp, and Seeds within: The Root dies in Winter, the Seeds are yearly sown about the beginning of *April*, and must be often watered to bring them forward before Winter.

*Asphodils.*

*Asphodils* are of no great beauty, but may be planted and increased as other bulbous Roots are, for Variety's sake.

*Auricula's.*

*Auricula's*, or *Bears Ears*, is a Flower that affords a very great Variety of Form as well as of Colour, and is not only beautiful to the Eye, but also of pleasant Scent; the double sort is the most rare, and the *Windsor Auricula* the most splendid. They blow in *April* and *May*, and some of them again about the end of *August*. If you crop off the Buds that offer to blow late in Autumn, it will cause them to yield you the fairer Flowers in Spring. They delight in



a rich Soil, and shady, but not under the Drip of Trees. They must be often removed, once in two Years at least, and the Ground enriched, else they will decay. The striped and double must be removed oftner, or else they will degenerate. If you set them in Pots (which is the best way to preserve them) fill the Pots almost half full with sifted Cow-dung, and the rest with a good light Mould enriched with the same Dung. In the Winter, place them in the Sun, but in Summer in the shade. Defend them in Winter from the wet, but for the Cold you need not regard them. You may raise them from the Seed by careful gathering of them, and preserving of them in their Umbels 'till about *August* or *September*, when you must sow them in Boxes almost filled with the Mixture you made for the Plants, and about a Finger thick at the Top with fine sifted Mellow Earth, or dried Cow-dung beaten small, and mixed with Earth; in which sow your Seeds mixed with Wood-Ashes: Then cover them with the same Mixture of Earth sifted thereon, and about *April* following they will come up, and you may plant them out where you design them. It will do well to water them once a Week with the same Water which you water Orange Trees with; some of them will bear Flowers in *April* following. When they have done blowing, wait for a shower of Rain, and then take up your Plants, cut off some of the Roots and replant them if it doth not Rain, water them very well. If the Leaves discolour, cover them from the Sun all the heat of the Day.

B.

*Bacchus-bole.*

*Bacchus-bole*, is a Flower that is not tall, but a very full large broad-leafed Flower, being of a sad light Purple, and a proper white, divided equally, having the three utmost Leaves edged with a crimson Colour, blewish Bottom, and dark Purple.

*Batchelors-*



*Batchelors-buttons.*

*Batchelors-buttons* are raised or increased by Slips. They are of three or four sorts.

*Bears-Ears Sanicle.*

*Bears-Ears Sanicle* is almost of the Form of an *Auricula*; 'tis usually raised of Seed planted in Pots, and preserved as other tender Plants.

*Bean-trefoil.*

*Bean-trefoil* so termed from the likeness of its Leaves to the Herb *Trefoil*, and its Pods to Beans. It affords many fine yellow Blossoms, and is a very pleasant Flower. It is increased by Seeds, Cuttings, and Layers; it requires some artificial Help to support its weak Branches. There are three kinds of it; the smallest is called *Cytisus Secundus Clusii*.

*Bee.*

*Bee* or *Gnat-Flowers* are of several sorts, and are very beautiful, but tender, and therefore are cautiously to be removed: They are to be taken up, Earth and all, and you must endeavour to plant them in such Ground as you removed them from.

*Bell-Flowers.*

*Bell-Flowers* are of several sorts, and are both double and single; they are increased by parting of the Roots, and of Seeds sown in *April*.

*Bindweed.*

*Bindweed* is of two sorts, the larger and the smaller; the first sort Flowers in *September*, and the last in *June* and *July*: The Roots die in Winter, and so they must be annually raised of Seed; the first sort requires a Hot-bed, but the latter will thrive without any trouble.

*Bladder-nut.*

*Bladder-nut* grows low, if neglected to be pruned up, and kept from Suckers; the Bark is whitish, and the Leaf like Elder-leaves, white and sweet, hanging many on a Stalk, after which come greenish Bladders with a Nut in them; 'tis increased of Suckers.



*The Art of Husbandry: Or,**Blue-borage.*

*Blue-borage* leaved, *Auricula* is leaved like Borage, yields fine blew Flowers. It is a tender Plant, and set in Pots, and must be preserved in the Conservatory from the Extremity of the Winter.

*Bastard-bittany.*

*Bastard-bittany* is of two sorts, the white and the red, which grows about two Foot high, bearing a reddish Flower, having many brown woodish Stalks, and on the lower-part of them many winged Leaves like those of the Ash, but larger, longer, and purpled about the Edges, being of a sad green Colour. The white is hard to be increased, and must stand in a rich Soil, they are increased by parting of the Root, which may be done every Year to the red; but to white not above once in two or three Years.

## C

*Candy Tufts.*

*Candy Tufts* must yearly be increased by Seed, the Roots perishing in Winter.

*Cardinal-flowers.*

*Cardinal-flowers* have large Leaves, from whence arise tall hollow Stalks set with Leaves, which are smaller by degrees as they come nearer to the Top, from which come forth three Flowers consisting of five Leaves, three standing close together hanging down-right, and two turned up. The rest which is composed of many white strings lasts many Years: They must be planted in a Pot in good rich light Earth, and the same in Winter; set in the Ground under a South-wall three Inches deeper than the Top, and cloathed about on the Top with dry Moss, and covered with a Glass, which may be taken off in warm Days, and gentle Showers, to refresh it, which must be observed, especially at the first setting of it out in April. They may be increased by parting of the Roots in August, in rainy weather, or by planting of the Stalks that have flowered, which must be cut off from



from the Plant the length of three Joints, including the Button you put into the Ground.

*Columbines.*

*Columbines* are of several sorts and colours. They flower in the End of *May*, when few other Flowers shew themselves: They all bear Seeds, but those that come of a single Colour should be nipped off, and only the variegated ones left for Seed, or those which come of the best double Flowers; which being sown in *April*, will bear the second Year. The Roots will continue three or four Years; but they are apt to degenerate, unless the Seed be changed.

*Cornflag.*

*Cornflag* is a Plant fit for our Borders, because of its rambling broad long stiff Leaves, the Stalk rising from among them bears many Flowers, one above another. They are of several sorts, of which the most remarkable are first that of *Constantinople*, having deep red Flowers, with two white Spots in the Mouth of each Flower; their Roots afford many Off-sets if they grow long unremoved. Secondly, The *Cornflag* with a bright red Flower; and, Thirdly, The Ash-coloured ones.

They flower in *June* and the beginning of *July*, the *Byzantine* being the latest: Some of them have their Colours intermixed, they all of them lose their Fibres as soon as the Stalks are dry, and may then be taken up and kept out of the Ground free from their many Off-sets, and set again in *September*.

*Corn-flowers.*

*Corn-flowers* or *Blue-bottles*, whereof there are many Sorts, being raised from Seeds differing in Colours; the Seeds should be saved in Spring, because the Roots perish every Winter; some of them flower in *June* and *July*, and others in *August*, the Seeds should be sown in *March*; they require a good Soil, or else they will not come up.



*Cowslips.*

*Cowslips* are of various kinds, as those that have Hoses within a Hose, as the double Cowslip: The double green ones, the single green, the tufted, the red, the orange, &c. and some of a fine scarlet and very double; whose Flowers must often change their Earth, or they will degenerate and become single.

The Seeds are to be sown in a Bed of good Earth in *September*, and they will come up in the Spring; they may likewise be increased by parting of the Roots.

*Crains-bill.*

*Crains-bill* is of several sorts, but the sort most used in Gardens is the musked kind; 'tis raised by Seeds, or by parting of the Roots.

*Crocus.*

*Crocus* are of divers sorts, whereof some flower in *February* and *March*, and others in *September* and *October*: They are also of great Variety of Colours; when they lose their Leaves they may be taken up and kept dry: Those of Autumn till *August*, and those of the Spring till *October*; they are hardy and will prosper any where. But the best place to plant the Spring *Crocus*'s is close to a Wall or Pail, or on the Edge of boarded Borders round the Garden, mingling the Colour of those of a Season together; as the White with the Purple, the Gold with the Royal, &c. The Seed must be kept in the Husk till sown, and a light rich Ground should be chosen for them: They must not be placed too thick, they may be increased also by Off-sets.

*Crown-Imperial.*

*Crown-Imperial* hath a great round Root, a long Stalk and long green Leaves, with a Tuft of small ones on the Top, and under that eight or ten Flowers



ers of an Orange-colour. There are other sorts also, as the double, and the yellow ones. They flower in *March* or the beginning of *April*, being propagated by Off-sets that yearly come from the old Roots, which may be taken up after the Stalks are dry, which will be in *June*, and kept out of the Ground till *August*. The double Orange-coloured and Yellow shew finely intermixed. The double ones bear Seeds, from which, and from the Yellow, when attainable, you may expect, if sown, some new Varieties, but from the common ones there is but little hopes.

D.

*Daffodils-Narcissus.*

*Daffodils-Narcissus* are of great Variety, of different Colours, and some are single, others double; and some bear many Flowers on a Stalk, others but one. They flower from the end of *March* to the beginning of *May*. They are hardy and will grow most of them in any shady place; most sorts of them should be taken up in *June*, and kept dry till *September*, and then set again. To make Varieties of them, the Seeds of the best single ones, for the double bear none, are to be sown in *September*, in such places as they may stand two or three Years before they be remov'd, and then taken up in *June*, and set presently again in good Ground; the Seeds are ripe when they look black; at which time pull them off, and clearing of them from the Husk, lay them by till *August*, and then sow them an Inch deep in the Earth, which should not be too strong nor stiff; they should be sowed when you expect Rain, which if you want, lay a Straw Mat over them, and pour Water upon it, which soaking through, will moisten the Ground enough; for too much moisture is not good; which Mat should always be left on them, except when it rains, or the morning dews fall, which are better for Seeds than watering. When they come up, they must not be meddled with the first Year, except to clear them of Weeds;



Weeds; and the Ground should be covered with Dung if the Frost in Winter be very hard; you may cover them, but then they should not be uncovered again till *March*. The Seedlings should be taken up about the middle of *July*, when they are two Years old. They will be four or five Years old before they bear; and the first Year of their blooming they bear not many Flowers, but the next Year they come to perfection. This Plant requires a good fat Soil, and to stand in a warm place, because it flowers early.

*Dazies.*

*Dazies* are of various sorts, as the great white, the all red, the great red and white Daisie; the abortive, naked, green, &c. They all flower in *April*, and may easily be increased by parting of the Roots in Spring, or Autumn; but they must be well watered, especially if they stand too much in the Sun.

*Dittany.*

*Dittany* is a hardy Plant, and of several sorts, which Flowers in *June* and *July*, their Seeds being ready to gather in *August*, which will be all lost without care taken to prevent it. It endures long without removing, and yields many new Roots which should be taken from the old the beginning of *March*; various kinds are raised of them from their Seeds sown in rich Earth, as soon as ripe; as the deep red, white, Ash-colour, &c.

*Dog-Fennel.*

*Dog-Fennel* has deep dark green Leaves, and broad spread double white Flowers at the Top of the Branches: The Root is only many small strings, which is increased by parting of it in the End of *August*, nipping off the Buds for Flowers as soon as they appear.

*Dogs-Tooth.*

*Dogs-Tooth*, or Dogs-Tooth-violet is a kind of *Satyrion*, grows about half a Foot high with one Flower at the Top. Of which there are these following sorts. 1. Those with white Flowers, 2. with Purple, 3. with Red, 4. with yellow; all of them Flower



er about the End of *March*, or beginning of *April*. They love a good fresh Earth, but not a dunged Soil; They should be planted in *August* e're they put forth new Fibres; for tho' they lose the old, they quickly recover new ones, wherefore they must not be kept out of the Ground; and when set, must be defended from Rain for a Fortnight, for much Wet will rot them.

*Dorothea.*

*Dorothea* is a fine Flower of a deep brown Purple, curiously edged and daped with red and lighter Purple, with a white bottom.

E.

*Æthiopian Star-flower.*

*Æthiopian Star-flower* is a beautiful Flower in *August*, but it must in Winter be preserved from the rigorous Colds, by some shelter; or the removing of it into some Garden-house.

F.

*Double Featherfew.*

*Double Featherfew* is like the single, only the Flowers are thick and double, being white and somewhat yellow in the Middle. It's increased by Slips that run to Flowers in *August*.

*Flower-de-Luce.*

*Flower-de-Luce*, of which there are two sorts; one with Bulbous roots, of which there are several kinds, and colours, and the Tuberos rooted ones, of which there are as great Variety as of the former. They flower in *May* and *June*. The Roots of those whose Leaves die, should be taken up and replanted in *September*, which is the best time to remove them. They are increased by parting of the Roots: They delight in a good Soil. And some sorts of the Bulbous roots being apt to shoot forth green Leaves in Winter, they should be a little defended from the Cold.



## *The Art of Husbandry: Or,*

### *Indian Fig.*

The *Indian Fig* is preserv'd for the Rarity of it, there being no Plant in Nature that puts forth its Leaves like it: It must be housed in Winter, and is increased by laying down of the Leaves.

### *Fox-gloves.*

*Fox-gloves* are of various sorts and colours, and flower in *June* and *July*, and some sorts of them in *August*. They are raised of Seeds which should be sown in *April*, in good rich Earth: The best time to remove them is in *September*. They do not bear Flowers till the second Year.

### *Fritillaries.*

*Fritillaries* have small round Roots made of two pieces, as if joined together, from whence springs a Stalk bearing the Flower. There are great Varieties of them of divers Colours, and some single, and other double, of which some flower in *March*, some in *April*, *May* and *August*. The Roots lose their Fibres as soon as the Stalks are dry; and may then, or at any time, before the middle of *August*, be taken up, and kept dry some time; though they should not be taken up too soon, nor kept too long out of the Ground, both being apt to weaken them.

### G.

### *Gentianella.*

*Gentianella* is a low Plant, yielding many blue Flowers in *April* and *May*.

### *Glastenbury-Thorn.*

*Glastenbury-Thorn* which blossoms in *December*, as other Thorns do in Summer. Its first Original coming, as they say, from *Glastenbury Monastery*: 'Tis raised and increased as the common Thorn.

### *Gilly-flowers.*

*Gilly-flowers*, or rather *July* Flowers, from the Month they blow in, are of very great Variety; but they may be reduced to these four sorts; Red and White, Crimson and White, Purple and White, Scarlet and White, the various Kinds of which are too



too many to enumerate, and therefore I shall rather proceed to their Propagation and Culture. The chief thing to be considered to make them produce fair large Flowers, and many Layers, is the Soil in which you plant them, which should be neither too stiff nor over light. In order to which provide a quantity of good fresh Earth, and mix it with a Third-part of Cow-dung, or Sheeps-dung, that hath been long made: To which add a small quantity of Lime; lay this mixture on a heap, and make the Top of it round that it may not take in wet: Let it lie so long as to ferment well together, turning of it up often that it may be mellow before you put it into your Pots, or Beds, for planting of your Layers in. Take your Layers off in *September* or *March*, which last is always best, and cut from them all the dead Leaves, and the Tops of all that are too long, which take up with as much Earth as you can, and set them in Pots, or in a warm place, where you may cover them in Winter, in the afore prepared Earth. They must be well watered in dry Seasons, and not too much exposed to the Noon-sun; the Morning-sun being esteemed the best for them.

Some have used another sort of Earth for them, and that is the Rubbish of a Tan-pit, that by long lying is turned into Earth. To one Barrow-full of which they add four of the Earth of Wood-stack: But what is esteemed the best, especially for Layers, is the Earth in an old rotten Willow. When the Flowers begin to spindle, all but one or two of the biggest, at each Root, should be nipped off, leaving them only to bear Flowers, and the same thing must be observed about the Bud, which will make the Flowers the fairer, and gain the more Layers, by which the Kinds are continued and increased. The Spindles must be often tyed up, and as they grow in height to small Rods, set on purpose by them, lest by their bending they should break, and their Flowers be lost.



The chief Time of laying Gilly-flowers, is in *July*, when the Flowers are gone which must be done thus: The strongest Side-shoots having Joints sufficient for laying, are to be chosen, whose sides and end of the Top-leaves are to be cut off; the undermost part of the middlemost Joints are to be cut off half through, and the Stalk from thence slit through the Middle upwards to the next Joint; the Earth is to be opened underneath to receive it, and the Layer to be gently bent down into it, with a small Hoop-stick to keep it down, the end of the Layer being bent upwards, that so the slit may be kept open when covered with Earth, which must be kept well watered, especially if the Season be dry. It will make them root the sooner, so as that you may remove them with the Earth, about the beginning of *September* following into Pots or Beds of the aforesaid Earth, which must be shaded and gently watered; but too much Water may be apt to rot them, wherefore they are to be sheltered from Rain with Boards, supported with Forks and Sticks laid on them, but not too near lest they should perish for want of Air. Care also is to be had in transplanting of them, that the Layers are not set too deep, which is what hath occasioned the loss of many. And if any should not have taken root, you may lay them anew, and make the Cut a little deeper, and so let them remain till Spring, and you may then plant them out as you see fit.

Some of these Flowers, in Summer, shoot up but with one Stem or Stalk, without any Layers; which if suffered to blow, the Root dies: Wherefore the Spindle must be cut off in time, that it may sprout anew, which will preserve the Root; but when any of them die in Pots, they are to be emptied of the old Earth, and new put in before another Flower is planted therein. If Roots produce too many Layers, in good Flowers, three or four are enough to be laid. When your Gilliflowers blow, if they break the Pod, open it with a Penknife or Lancet at each Division,



as low as the Flower has burst it, and bind it about with a narrow slip of Goldbeater's Skin, which moisten with your Tongue and it will stick together. The first Flowers are to be kept with Seeds, and their Pods left to stand as long as may be for the danger of Frost, and kept as much as possible from Wet: The Stems, with the Pods, must be cut off and dried so as not to lose the Seed, which is ripe when black and the Pod dry.

The best time to sow the Seed is the beginning of *April*, if the Frosts are over, on indifferent good Ground mix'd with Ashes in a place which has only the Morning Sun; the Seeds must be taken from the best double Flowers, and be daily watered till they come up; they must not be sown too thick, and the same Earth should be sifted over them a quarter of an Inch thick that you prepared for the planting of them in; the Seedlings when grown to a considerable height, may in *August* or *September* following be removed into Beds, where they must stand till they flower. If you have any Gilliflowers that are broken, small, or single, you may graft other Gilliflowers on them that are more choice, but graft them on the most woody part of the Stalk, the best way is Whip-grafting. The Earth about your Gilliflowers ought to be renewed once in two Years at least; for by that time they will have exhausted the better and more appropriated part of the Earth and Soil. They cannot be kept too dry in Winter, except you find them begin to wither, then you may water them sparingly.

## H.

### *Hearts-ease.*

*Hearts-ease* is a sort of Violet that blows all Summer, and often in Winter; it sows its self, and may also be increased by parting of the Roots; it requires a good Soil.

### *Hellebore.*

*Hellebore* is of several sorts; as the Black, which flowers at *Christmas*, and the White and Red, which  
flowers



flowers in *June*: Their Roots are composed of divers long brown Strings running deep in the Ground, from whose big End the Leaves and Flowers arise. They may be increased by parting the Roots in Spring; and as they are hardy and abide long without removing, they should at first be planted in good Ground.

*Hepatica or Liverwort.*

*Hepatica or Liverwort*, is a very fine Flower, 'tis of two sorts, the single and the double; it never riseth high, yet yields variety of Blossoms in *March*, of which the White is most valued; they are raised of the Seed of the single ones, which must be very ripe before you gather it. Keep the Ground moist till they come up, and then house them, for they are very tender when young; and when they are housed, they must be watered once in five or six Days, and that not too much. You may transplant them when they are a Year old into a sandy Soil, a little dunged; they may also be increased by parting of the Roots; they deserve your Labour and Care, which is not much to plant and propagate.

*Honey-Suckle.*

*Honey-Suckle*: Of this Plant there are three sorts; *first*, the Common One, *2dly*, that called the Double One, producing a multitude of sweet Flowers growing several Stories one above another. 3. The Red *Italian Honey-Suckle*, which grows somewhat like the Wild or Common One, but has redder Branches, the Flower longer and better formed than those of the former, being of a fine red colour before they are fully grown, but afterwards more yellow about the Edges. They flower in *May* and *June*, and are easily increased of Layers or Cuttings.

*Holliocks.*

*Holliocks* far exceed the *Poppies* for their Durableness, and are very ornamental, especially the Double, whereof there are various Colours, they should be sown in good Earth an Inch deep, and kept moist till they are some heighth; They are sown one Year  
and



and flower the next; they may be removed in *August* or *September* from your Seminary, they being raised of Seeds, into their proper places of growth, which should be near some Shelter from the Wind because of their height; they may also be increased by Shoots cut off of the Stem.

*Hollow Roots.*

*Hollow Roots* are of several sorts, they come up in *March*, and flower in *April*, and fade away again in *May*; they may be kept out of the Ground two or three Months; they increase very much in any Soil, but they like the sandy best, if not too much exposed to the Sun.

*Hyacinths.*

*Hyacinths*, or *Jacinths*, are all bulbous Rooted, except the tuberous Rooted *Indian Hyacinth*, which we reserve for the Conservatory. The sorts of them which are Muscaries or Grape-flowers, whereof there are great Diversities, as Yellow, Ash-coloured, Red, White, Blew, and Sky-coloured, &c. and also the fair haired branched *Jacinth*, the fair curled haired *Jacinth*, the Blew, White, and Blewish, starry *Hyacinth* of *Peru*, and the blew silky leaved starry *Hyacinth*, that yields fair Flowers on large Stalks. These flower in *May*, and may be removed in *August*; they lose not their Fibres, and so are not to be kept long out of the Ground.

But there are several sorts of them that lose their Fibres, and may be kept longer out of the Ground, and are to be preferred to the other, for that they come early in the Year, as from *February* to *April*, being very sweet and well coloured.

Some are more double, as well White as Blew, and therefore are to be esteemed because of their Party-flowering. They may be raised of Seed, which must be sown in *August* in very rich Ground: They come up in Spring, and sometimes in Winter; they should be covered with Straw to preserve them from the Frost; they are also increased by flitting the



Bulb with a Penknife on four Sides, but not so deep as the Heart. The Seedlings should be taken up about *Midsummer* when the Seed is black, and laid in a dry place; and as soon as they are quite dry they should be replanted. They begin to blow the fourth Year; they should be planted in a lean Soil, without any Dung.

## I.

*Indian.*

*Indian* or *Garden-Cresses*, may be raised of Seed in Hot-beds, if you desire them forward; else if you sow them in *April* in good Garden Ground, they will thrive very well; they are from a Flower become a good Salad.

*Indian Reed.*

*Indian Reed* has fair large green Leaves coming from the Joints of the Stalks, which bear divers Flowers on the Top, like the *Corn-Flag*, of a bright Crimson Colour, being succeeded by three square Heads, containing Seeds. It hath a white tuberous Root, by parting of which 'tis increased. There is also a sort with yellow Flowers, they must be set in Boxes of good Earth, often watered, and housed in Winter, for one Night's Frost destroys them.

*Irises.*

*Irises* are both bulbous and tuberous Rooted: The Bulbous afford very great Variety, some of them (as the *Persian*) flowering in *February* or *March*, others in *April*, *May*, *June*, and *July*. There are some of them very fair and beautiful, their Colours are either Blew, Purple, Ash-coloured, Peach-coloured, Yellow, White, or Variegated. Their Roots may be taken up as soon as the Leaves begin to wither, for soon after they are quite withered, the Bulbs will issue out more Fibres, and then it will be too late to remove them, otherwise you may keep them dry 'till *August* or *September*. They delight in good Ground, but not too rich, on a sunny Bank, but not too hot: The Eastern Aspect is the best.

Those



Those with tuberous Roots are not altogether so various as the Bulbous, yet they afford many curious Flowers, the best whereof is the *Calcedonian Iris*, vulgarly called *The Toad Flag*, from its dark marbled Flower. This Species of them ought to be carefully ordered, else it will not thrive well; it requires warm and rich Soil to be planted in, and because 'tis apt to shoot forth green Leaves before Winter, it expects to be a little sheltered from the Cold. These may be taken up when the Leaves begin to dry, and kept some time in the House, and then replanted in *September* or *October*, which will make them thrive the better. The other sorts of Tuberose rooted ones are much more hardy, and increase exceedingly in good Ground.

*Jucca-India.*

*Jucca-India* hath a large Tuberous Root and Fibres, whence springs a great round Tuft of hard, long, hollow, green Leaves, with Points as sharp as Thorns. Its Flowers consist of six Leaves, being of a reddish blush Colour. It must be set in Boxes that are large and deep, and housed in Winter, though some say it will endure our Climate.

*Junquils.*

*Junquils* are a kind of Daffodils, and are of several sorts, as the single and the double, and those that have many Flowers on a Stalk, and must be ordered like them; they flower about *April* and *May*, and are increased by parting the Roots. They should be taken up about *Midsummer* once in two or three Years whether they be green or not, you must lay them in a dry place without cutting off the Leaves, and plant them again in *August*.

L.

*Ladies Slipper.*

*Ladies Slipper* is a Flower valued by most Florists, although wild in many Places of the North of *England*: It yieldeth its Flowers early in Summer, is a

Q 2

hardy



hardy Plant in respect of cold, but not very apt to be increased.

*Ladies Smock.*

*Ladies Smock* has small stringy Roots that run in the Ground, and comes up in divers places, by parting of which it may be increased.

*Larks Heels.*

*Larks Heels* are of several sorts, as well double as single, though but one kind is worth preserving, and that is the double upright *Larks Heel* with jagged Leaves, tall upright stalked, branched at top, and bearing many double Flowers, some Purple, and some Blew, &c. and some Roots now and then produce striped and variegated Flowers with Blew, White, &c. The Seeds succeed the Flowers in small hard Pods that are black and round, which being sowed, will produce some single, but mostly double Flowers: The Roots in Winter perish, they flower sooner or later, according as they are sown. The usual time of sowing them is the beginning of *April*; but to get good Seed some may be sown as soon as ripe in places defended from long Frosts, and one of these Winter Plants is worth ten of those planted in the Spring.

*Lily.*

*Lily.* Of this Plant there are divers kinds, as, 1. The *Fierly Red Lily*, that bears many fair Flowers on an high Stalk, of a fiery Red at the top, but at the bottom declining to an Orange-colour, with small black Specks. 2. The *Double Red Lily*, having Orange-coloured single Flowers, with little brown Specks on the sides, and sometimes but one fair double Flower. 3. The *Yellow Lily*, which is the most esteemed of any, being a fine Gold-colour. 4. The common White one, which is like the Red. 5. The *White Lily of Constantinople*, smaller every way than the last, but bears a great many more Flowers. 6. The *Double White Lily*, which is like the common sort except



cept in Flowers, which are constantly Double, and seldom open but in fair Weather. 7. The *Persian Lily*, rooted like the Crown Imperial, beset with Leaves to the middle of the Stalk, and from thence to the top with many small Flowers hanging their Heads: These (except the last, which Flower in *May*) put forth their Flowers in *June*: They are increased by parting of the Roots, which hold their Fibres, and therefore should not be often removed, but when there is occasion; the best time is when the Stalks are quite dried down, for then the Roots have fewest Fibres. They may be raised of Seed, but then they are long before they blow. They ought to be set five Inches deep, and their Roots uncovered every Year without stirring the Fibres of the old Roots; the young ones may be parted from them, with only an addition of new rich Earth put to them, which will much advance the fairness of their Flowers. They should be taken up once in four or five Years.

*Lilies of the Valley.*

*Lilies of the Valley*, though wild in some places are very much valued for their rich Scent and Usefulness in Physick: They are increased by parting of their Roots, and delight in a moist rich Soil, and to grow in the Shade. They flower in *May*.

*Lychnis.*

*Lychnis* or *Calcedon* are single and double, the single only bear Seed, but the double may be increased by dividing of the Root in *August*, or by setting of the Stalk, as is said of the *Cardinal Flower*. They delight in a good Soil.

M.

*Mallows of the Garden.*

*Mallows of the Garden*, is a fair large Flower, much diversified in their Form and Colour; the time of its flowering is in *August* and *September*, when the Flowers are past; the Seeds are contained in round flat Heads, and as they Flower late, the first Flowers must be preserved for Seed; for though the Plant is



of some continuance, it is chiefly raised from Seed sown the beginning of *April*, which will bear Flowers the second Year.

*Martagon.* See *Lilies*.

*Marvel of Peru.*

*Marvel of Peru*, so termed from its wonderful Variety of Flowers on the same Root: They Flower from the beginning of *August* till Winter, being destroyed by the Frosts: The Seeds should be set the beginning of *April*, and from their Hot-beds removed into rich Earth, where they may have the benefit of the Sun: Upon their failure to Flower the first Year, Horse-dung and Litter must be laid on them before the Frosts, and so be covered all Winter, and they will Flower the sooner the succeeding Year, and the Roots of the best kind, when they have done Flowering, may be taken up and dried, and wrapped up in Woollen Rags, and so kept from Moisture all Winter, and being set the beginning of *March* will prosper and bear.

*Maracoc.*

*Maracoc*, usually termed the *Passion-Flower*: This Plant is encreased by Suckers naturally coming from it, and if the Root be preserved from the Extremity of Frosts, it will Flower the better, it should else be planted against a South Wall. They Flower in *August*. Snails as naturally affect this Plant as they do the Fruit of the *Nectarine* Tree, and as Cats do *Marum Syriacum*, and therefore care must be taken to defend them.

*Meadow Saffron.*

*Meadow Saffron* is of several Sorts and Colours, and is both double and single. Their Roots should be taken up about the middle of *July*, and set about the end of *August* or beginning of *September*, will suddenly put forth Fibres, and soon after Flowers, being first blown from the time of the setting of the dry Roots of all others; they are easily planted, the Roots losing their Fibres, which may be taken up as soon



soon as the green Leaves are dried down, and kept out of Ground, 'till the time of planting: They will thrive almost in any Soil, tho' they affect moist best.

*Moly.*

*Moly*, or *Wild Garlick*, is of several Sorts or Kinds, as the *Great Moly of Homer*, the *Indian Moly*, the *Moly of Hungary*, *Serpents Moly*, the *Yellow Moly*, *Spanish Purple Moly*, *Spanish Silver-capped Moly*, *Dioscorides's Moly*, the *Sweet Moly of Montpelier*, &c. The Roots are tender, and must be carefully defended from Frosts.

As for the time of their flowering, the *Moly of Homer* flowers in *May*, and continues 'till *July*, and so do all the rest except the last, which is late in *September*. They lose their Fibres, and may be taken up when the Stalks are dry, and the biggest Roots preserved to set again, casting away all the small Off-sets, wherewith many of them are apt to be pestered, especially if they stand long unremoved. They are hardy, and will thrive in any Soil.

N.

*Shrub Nightshade.*

*Shrub Nightshade* has a woody Stock and Branches, dark sad green Leaves, and flowers like that of the *common Nightshade*; it is increased by Layers, and flowers the end of *May*.

*Nonsuch.*

*Nonsuch* is distinguished into two sorts, the single *Nonsuch Flower of Constantinople*, or *Flower of Bristol*, which bears a great Head of many Scarlet Flowers, whereof there is another, which only differs in the Colour of the Flowers, that at first are of a Blush Colour, but grow paler, and a third with white Flowers. And the double rich Scarlet *Nonsuch*, which is a large double-headed Flower of the richest Scarlet Colour: They flower the latter end of *June*; they are a hardy Plant, but prosper the worst in hot or too rank Ground. They continue long, and



are increased by taking young Roots from the old at the end of *March*, when they come up with many Heads; each of which divided with some share of Roots will grow, and soon come to bear Flowers.

*Noli me tangere.*

*Noli me tangere* may be planted among your Flowers, for the Rarity of it; because its Pods, though not fully ripe, if you offer to take them between your Fingers, will fly to pieces, and cause the unwary to startle at the Snap. This Plant is annually raised of Seeds, and only propagated for Fancy sake.

P.

*Perriwinkle.*

*Perriwinkle* is a low creeping Plant, some bearing white, some blue Flowers; it will grow in any shady place, or under the dropping of Trees, and its Leaves are always green. There is also a sort of it, whose Leaves are very finely gilded, which will make a fine shew under gilded Trees.

*Pinks.*

*Pinks*, though a mean Flower, yet the common red sort, or the double ones planted on the Edges of your Walks, against the sides of your Banks; will not only preserve your Banks from mouldring down, but when in Blossom are a great Ornament, and an excellent Perfume; and when out of Blossom they may be clipped by a Line, which will keep your Borders even and straight. They flower in *June*, and are commonly raised of Seed, sowed in *March*, or planted out by parting of the Roots which are apt to spread.

*Poppies.*

*Poppies* are a fine Flower for Colour, only of an ill Scent, and not lasting: They are of divers Colours, and very double, as Red, Purple, White, and some Striped; but the most esteemed is the fine Golden coloured one, which flowers in *May*. They yield much Seed, by which you may increase them, which should



should be saved in *March*, or they will increase themselves by the falling of the Seed.

*London Pride.*

*London Pride* is a pretty fancy, and does well for Borders; 'tis increased by parting of the Roots.

*Primrose.*

*Primrose* is an early springing Flower, of which there are great Varieties; as the double Pale, Yellow, single Green, single Yellow, the Red, the Scarlet, the red Hose in Hose, the double Red, &c. Their Seed sown in *September*, or in a Bed of good Earth, will come up at Spring; or you may increase them by parting of the Roots.

*Q.*

*Queen's Gilliflower.*

*Queen's Gilliflower*, or *Dame's Violets*, are of several sorts; as the single with a pale Blush, the single White, the double White: Like the single, only there are many Flowers on a Branch, standing thick on a long Stalk, of a pure white and sweet Scent. The Purplish differing only in the Colour of the Flowers, that are of a fine pleasant, light, reddish Purple; and the double striped, which is most esteemed.

These Plants flower the beginning of *June*, and blow till the end of *July*; being easily raised from any Slip or Branch, which set in the Ground at Spring, and shaded, and watered, will grow: But the Buds of it must be nipped off as soon as they appear, for Flowers; otherwise they will blow and kill the Root.

*R.*

*Ranunculus.*

*Ranunculus's* are to be ordered like *Anemonies*. They excel all Flowers in the Richness of their Colours; nor is there any Flowers so fine and fair, as the larger sorts of them, of which there are great Variety; as the double White, Crow-foot of *Candia*, the Cloth of Silver Crow-foot, the double yellow Crow-foot or *Asian Ranunculus*, the double Red one of *Asia*, the striped



striped ones, the Monster of *Rome* very rich and double, the Monster striped, the Purion of *Rome*, the *Morvila*, the *Ferius*, the *Ferius Trache*, the *Ranunculus* of *Aleppo*. The best of the single ones are the Golden *Ranunculus* striped with Scarlet. The *Rosa Frize*, the *Roman*, the *African*, the *Besanon*, the *Melidore*, the *Pannisan*, the *Didonian*, &c.

They must be planted in a very rich dry Earth, well dunged, and about *Midsummer* taken up and kept dry in Papers or Boxes till they are set again, which should be done in *December*, for they come up too soon if set earlier, and are destroyed by the Frosts, unless they be daily covered and carefully aired; and then in such Case you may plant them in *October*. They should be planted about two Inches deep. Some commend the mixing of human Dung with the Soil you set them in. When they come up in *March* or *April*, they should be often watered. Their Leaves once nipt by the Frost, which their brown Colour will discover, often kills them to the Root; but covering of them often recovers them. If you would keep them long in Flower, cover them from the heat of the Sun only, when they have almost done Flowering uncover them that they may dry in the open Air, and according as the Weather is, dry or moist, they should be taken up sooner or later; and when they are taken up, put them in a dry place, so as to let them be thorough dry before you put them into Boxes, lest they grow Mouldy, which will cause them to rot when you replant them.

S.

*Scabious.*

*Scabious*, the common sort grows wild, but those planted in Gardens are of several sorts; the *White Flowered Scabious*, the *Red Scabious* of *Austria*, and the *Indian Scabious*: These Plants commonly die after their Seeding. The two first Flower about *July*, and the other in *September*, so that to get good Seed from them, the best way is the beginning of *June* to remov



remove the young Plants, to keep them from running into Flower the first Year, which will cause them to bring Flowers sooner the next, and so have time to ripen the Seeds. The Seeds must be gathered from the first Flowers, and sowed in *March*. In dry Weather you may water them; they live sometimes the Winter over when 'tis not too severe.

*Sensible Plant.*

The *Sensible Plant*, so called, by reason that as soon as you touch it, the Leaf shrinks up together, and in a little time dilates it self again: And the *Humble Plant*, so called, because as soon as you touch it, it prostrates its self on the Ground, and in a short time elevates it self again: They are both of them raised in Hot-Beds, and preserved with great Care, being the most tender Exotick we have.

*Snap-Dragon.*

*Snap-Dragon* or *Calves Snout*, so called, from the form of its Blossom. It has some pretty Diversities, as the *White Snap-Dragon*, which is very common; the White variegated one, the Red, which is of two or three sorts, and the Yellow: They flower from *May* to *July*, and the Seeds are ripe in *August*, they being all raised of Seeds, and bear Flowers the second Year, when the old Roots commonly perish, yet the Slips being taken off and set, will grow; the best being those that do not rise to Flower, and the best time of setting them is the end of *May* or beginning of *June*.

*Snow-Drops.*

*Snow-Drops*, so called, because they shew their Snow White Flowers sometimes in *January*, for which early blowing they are esteemed. They are increased by parting the Roots.

*Sow-Bread.*

*Sow-Bread* is of several sorts, as the bright shining Purple, the Vernal one, the pale Purple, and those that Flower in Spring, also White ones single, &c. so that some of the sorts are always in Flower from  
*April*



*April to October.* They are increased by dividing of the Root, which you may do in *April*, or about the middle of *July*, by cutting of them into three or four pieces; each piece will grow, only you must mind not to cut them too often; they should be planted, and on good Ground, if they are kept in the Conservatory, they will blow in Winter, if not, they should be covered a little from the Frosts.

*Spring Cyclamens.*

The *Spring Cyclamens* are the best, especially the double ones: They seldom increase by Roots, and therefore are raised by Seeds; the Head of the Vessel that contains them, after the Flowers are past, shrink down and wind the Stalks in a Scrowl about them, and lieth on the Ground hid under the Leaves, where they grow great and round, containing some small Seeds, which as soon as ripe must be sown in Pots or Boxes in good light Earth, and covered near a Finger thick. When they are sprung up, and the small Leaves dried down, some more of the same Earth is to be put upon them; and after the second Year they must be removed, where they may stand and bear Flowers; set them about nine Inches asunder.

*Spider Wort.*

*Spider Wort.* The *Italian* and the *Savoy* are the only ones fit for your choice. They Flower about the beginning of *June*. They are hardy Plants, and live and thrive in any Soil, but best in a moist one.

*Star-Flowers.*

*Star-Flowers* are of several sorts, as the *Star-Flower* of *Arabia*, the great white *Star-Flower* of *Bethlehem*, the *Star-Flower* of *Naples*, the yellow *Star-Flower* of *Bethlehem*, &c.

The *Arabian* Flowers in *May*, that of *Naples* and the *Yellow* in *April*, and some sorts of them not 'till *August*. They lose their Fibres, so that the Roots may be taken up as soon as the Stalks are dry, and kept out of the Ground until the end of *September*, except the yellow, which will keep out but a little time;



time; and the *Arabian* and *Æthiopian* are so tender as not to endure the Severity of a long Frost, for which reason they should be planted in Boxes, and set in rich Earth; but the rest are hardy.

*Stock-Gilliflowers.*

*Stock-Gilliflowers* are usually distinguished into single and double ones: The single are only valuable for their bearing of Seeds; the double ones may be distinguished into, 1. The double *Stock-Gilliflower* with divers Colours. 2. The double striped with White. 3. Another double one not raised from Seed. 4. The Yellow, whose Seeds produce double Yellow ones.

They begin to flower in *April*, and flourish in *May*, and so continue to do 'till the Frosts check them. To raise them, procure good Seed, and of the right kind, which the Seed of those single ones that bear fine Leaves in a Blossom are said to afford; and also the White single ones, and the Yellow double ones, and the older you take your Seed from, the better; these are to be sown at the Full of the Moon in *April* or in *August*, provided you keep them from the cold and wet, they must not be sown too thick, they delight in a good light Earth, and when grown three or four Inches high, must be removed into other Earth, or they may be set again in the same Earth, after turning of it, and mixing some Sand with it; which must be done speedily upon their taking up, that they may be set again presently at convenient Distances, and in some time serve them so again to prevent their growing high; by which means they will grow more hardy, grow low, and spread in Branches; which will make them endure the Winter, and be better to remove in Spring, than such as run up with long Stalks, which seldom escape the Winter Frosts. It may be seen in Spring by the Buds, which will be double and which single, for the former will have their Buds rounder and bigger than the others; them remove with care, not breaking off the Roots, but taking up a Clod of Earth with them, and set them  
in



in your Flower Garden, where they shall abide all Summer in good Earth, where being shaded, they will grow and bear Flowers as well as if not removed at all. Those that are single may stand to bear Seed, that must be yearly sown to preserve the kinds; for after they have born Flowers they are apt to die, but may be preserved by Slips or Cuttings, that will grow and bear Flowers the next Spring. The manner of doing of which, is in *March* to choose such Branches as do not bear Flowers, which being cut some distance from the Stock, slit at the end of the Slip, about half an Inch, in three or four places; then peel the Rind back as far as it is slit, and take away the inward Wood, turning up the Bark, which must be set three Inches in the Ground, by making of a round Hole that depth, and putting the Slip into it, with the Bark spread out on each side or end thereof; which cover up, and shade and water for some time, and the Ground being good it will grow and bear, some prefer *June* for setting the Slips in. If you take away the blowing Sprigs the preceding *Autumn*, it will much further their Duration. If you set them in Pots they should be housed in Winter, and kept as dry as you can, except you find them drooping, which if you do, you may moisten them a little, just to keep them alive and no more.

*Sun Flowers.*

*Sun Flowers*, some of them must be sown every Year, and others will keep always, and are increased by dividing of the Root, those raised of Seed are sown the beginning of *April* in a good Soil, they love the Sun and Air.

*Sweet Williams.*

*Sweet Williams*, or *Sweet Johns*, are of several sorts, but the double and the Velvet are chiefly worth your propagating; every Slip of them set in Spring will grow. They flower in *July*, and if their Seed be kept and sown, other Varieties of them may be gained, which must be sown in *April*; they do not

Flower



Flower 'till the second Year: They do very well to sow in Borders, and make a fine shew.

T.

*Thorn Apple.*

The *Thorn Apple* is of two sorts, the greater, which rises up with a strong round Stalk, four or five Foot high, branched at the Joints with large dark green Leaves, jagged about the Edges, and having large bell-fashioned white Flowers at the Joints, are succeeded by great round prickly green Heads, opening when ripe into three or four Parts, and full of blackish flat Seeds. And the lesser, differing from the other in the smallness of the Leaves that are smooth, rent at the Edges, and Stalks without Branches; the Flowers are not so big but more beautiful, the Heads rounder, less and hardier than the other. The Roots of both die in Winter. They are common, and will grow any where, being raised of Seeds.

*Toad Flax.*

*Toad Flax* are of several sorts, as, the *Wild Flax* with a white Flower, broader leaved than the common Flax, whose Root will abide many Years. The *Yellow Flowered Flax*, whose Roots are durable, for though the Branches die in Winter, the Root will send up new ones next Spring. The *Toad Flax*, whose Root dies as soon as the Seed is ripe. The *Sweet Purple Flower*, whose Root perisheth. The *Toad Flax* of *Valentia* is yellow Flowered; and brown *Toad Flax* with reddish Flowers. They Flower in *July* and *August*, and the Seed is ripe soon after: Such whose Roots abide the Winter are fit to be set together, the rest to be set with Seedlings in some place open to the Sun. They come up dry and need but little Attendance.

*Tube Rose.*

*Tube Rose*, the Stalks run up four Foot high more or less, the common way of planting of them is in Pots in *March*, in good Earth, well mixed with rotten Dung, they should be set in the House 'till *April*



is over, and kept dry 'till you see them spindle, and then you must water them, and set them in the open Air, or you may put them in a Hot-Bed, which is the surest way to have them early; when they have done blowing, lay the Pot on its side that no moisture may come to it, that the Plant may grow dry, and when the Leaves are dry take them out, and hang them up in a dry place.

*Tulips.*

*Tulips* afford such great Variety that it would be endless to make a Catalogue of their several sorts, since every Year produces new kinds of them. Their Colours being from the deepest Dye to the purest White, intermixed with the brightest Yellow, the transcendentest Scarlet, the gravest Purple, with other Compounds inclining to Green and Blue, &c. I shall therefore only name a few of the principal and best of them, and begin with the *Precoces* or *early blowing Tulips*, of which sorts may be reckoned

The *Florifante*, which is low Flowered, of a pale flesh Colour, marked with some Crimson and pale Yellow, and the bottom Bluish. The *Blindenburg* middle sized, the Tops of whose Leaves are of a Pease-blossom-colour, the sides White, Yellow, and Bluish. The *General Molwilk*, well marked with Carnation White and Yellow. The *Morillion Cramosine* of a bright Crimson or Scarlet and pure White. The *Perisbot* of a shining bluish Colour often marked with White. The *Fair Ann* of a Claret Colour with Flakes of White. The *Omen*, a fair large well-formed Flower, of a pale Rose-colour, with many Veins of Crimson with great Stripes of White. The *Galatea*, the *Superintendant*, the *Aurora*, &c.

The next are those called the *Medias*, or *middle Flowering Tulips*, as the *General Essex*, which is Orange-coloured striped with Yellow, and the bottom of a Purple. The *Pluto* of a sooty Orange-colour, variably marked with light and dark Yellow. The *Agot Robbin Paragon* of a sullen Red, marked with Dun-colour,



colour, Crimfon, and White. The *Royal Tudeal*, of a sad Red-colour about the Edges, whipped with Crimfon, and ftriped with pale Yellow. *Cardinal Elambiant*, a pale Scarlet marked with White. *Morillion of Antwerp*, a pale Scarlet and pale Yellow. *Bell Branc*, a dark brown Crimfon well marked and ftriped with White; with many others.

Only 'tis to be noted, that the White, Yellow and Red never change, but there are *Tulips* of different Reds, fome deeper, fome lighter, and fome are glittering, and others of a dull Colour; if any of thefe have a good bottom, let them ftand for Seed, the beft Colours being raifed from them.

The times of their Flowering is the latter end of *March*, *April*, and *May*; and to continue them the longer, pretty ftrong Hazle Rods bended Archways are ftuck in the Allys, of fuch an heighth that the Flowers may not reach them; over which a Tilt, made of Cap-paper, is laid, fo ftarched together, that it may be wide enough to reach the middle of each fide, with Rods paffed along the fides of this Tilt, as in Maps, to roll it up, and to each Rod a String in the middle to tie to the Bows over the Flowers to keep the Wind from raifing or blowing it off.

As to the planting *Tulips*, make your Beds for them of fresh light Earth, a Foot deep, and a Yard fquare, which will contain thirty Roots placed at about three or four Inches diftance; but fuch as are defigned for Seed muft be funk two Inches lower than the others, left their Stalks dry before the Seed ripen; and do not fet two Flowers of the fame Colour together. When the others put forth their Leaves, if any of them do not appear, or their Leaves fade, the Earth is to be opened to the bottom to find its Diftemper; and if the Root be moift and fquafhy there is no hopes of it; but if hard, 'tis recoverable by applying dry Sand and Soot to it, but not to blow that Year: And when 'tis taken up, which muft be done as foon as the Fibres are gone, care muft be had to keep it free from Moisture, 'till the Season



require it to be set again. *Tulips* may be increased by parting of the Off-sets, when you take them up, which being tender and small, should be replanted about the latter end of *August*, or a Fortnight after your taking of them up; you may leave them two Year in the Ground without taking of them up, provided you Weed them well, and keep the Beds clean.

*Tulip.*

*Tulip* Roots need no watering, but when they begin to Flower you may shelter them with Tilts, especially in the Night, to keep off the sharpness of the Frosts; such as hang their Heads must be tied up to small Rods that will just reach the Flowers. When they drop their Leaves, break off the Pods of all but what are intended for Seed, which must be clean, three edged ones, and of such Flowers as are large and strong, and the bottoms either Blue, Dark, or Purple; these must stand longer than the rest because of the Seeds ripening. As soon as the Stalks of the *Tulips* are dry and withered, the Roots will lose their Fibres, at which time they must be taken up every Year, but not when the Sun shines too hot, especially those of any value, and every sort put by themselves, that you may know how to set them again without Confusion; which you may know how to do by laying them on distinct Papers on which their Names are writ. They must be laid in the Sun to dry, and then put into Boxes and kept in a dry Room, and once in a Fortnight or three Weeks be looked on to see that they do not Mould, which if they are not gently aided and aired in the Sun sometimes they will be apt to do, which will spoil the Roots: If any of them are shrivelled or crumpled, and feel soft, it is a sign of their decaying; to prevent which, wrap them up in Wooll dipped in Sallet Oil, and place them where the warmth of the Sun may just reach them: About the end of *August* set them in the Earth, and mix Wood-Ashes and Soot with some  
fine



fine Mould and place about them. They should be covered with a Pot that no Wet may hurt them 'till the Fibres are put forth, which will be at the end of *September* or not at all, about which time the other Roots should be set in the same manner and form; and if they are all the Winter kept from too much Moisture it will do well, the Sun then not being able to dry them, and Frosts coming on may occasion their rotting and spoil them. *Tulips* are subject to the Canker, which you may know by their Leaves lying down, rolling up, and wrinkling, which when you find you must cut them off to prevent the ill Effects of it falling into the Root, and if you take up the Root too soon they will grow withered in two or three Days; which, when you observe, lay them in the Ground in a place where no Rain can fall upon them; let them lie seven or eight Days, and when you see them recovered, and grow close and firm, lay them up, and put some dry Earth over them, and they will keep well. But if you take up the Bulbs in dry Weather, put them into Boxes, and cover them with dry Earth that they may not dry too soon, but by Degrees, and let the Box stand in a dry Room, and in about three Weeks or a Month's time the Earth that is about them will dry, at which time it should be taken away, and the Bulbs left bare, and by that time they will be fit to keep 'till the time of transplanting of them. If you dung the Earth you plant them in, it should be with Neat's Dung that has lain so long as to be rotten. The best Composition, if the Earth be not naturally light enough for them, is two parts of Neat's Dung, two parts of fresh Earth, and two parts of Sea Sand where 'tis to be had, for want of which, Brook Sand will do, which should be well mixed and turned up together, before it be laid into the *Tulip* Bed. To make them continue long in Flower, cover them from the Sun and Rain; but you must mind, that when they shed their Flowers they be uncovered



again, that the Rain and Air may come at them, because at that time the Roots grow moist, and stand in need of the greatest Refreshing.

To raise Variety of *Tulips*, the best way is by saving of the Seed, which are ripe, when the Pods begin to open at the Top, which cut off with the Stalks from the Root, and keep the Pods upright that the Seed do not fall out of them, which you may set in a sunny Window, to perfect the ripening of them, and so let them remain 'till *September*, or thereabouts, and then separate the Seed from the Chaff, which sow in Boxes of about six Inches deep, some time in *September* or *October* at farthest: Four Inches of which fill with the finest sifted Mould that can be got, which must be light and rich, and rather ridled in than pressed down of an equal Thickness; upon which sow your Seeds about half an Inch asunder; then let more of the same Earth be ridled over them, not above half an Inch thick if you sow it in Boxes; but if you sow the Seed in Beds, empty them four Inches deep of their old Earth, laying Tiles flat on the place you emptied; on which Tiles sift some of your finest Earth, and order your Seed as before is directed in Boxes: When *March* comes it will be convenient to water the Seeds a little. The Violet coloured *Tulip* striped with White, is by many esteemed the best Colour to raise Seed of, which must not be sown on heavy Lands.

The Seeds being thus managed, the Roots of each should be taken up every Year 'till they Flower; as soon as their Leaves are dry, and kept free from moisture, or being too dry, 'till the latter end of *August*, and then be set again at wider Distances; the third Year they may produce two Leaves, and when they do they will Flower, and after the first Year they may be set in a deeper Soil, and richer Earth; a rich Soil being what will make them thrive best, and a barren one Flower best; the Change of Soil is what must be observed for them some time.

*Tyme.*



*Tyme.*

*Mastick Tyme* is a Plant of a curious Scent, and vulgarly known, apt to be increased by Slips, and as apt to be destroyed by Cold; but 'tis worth your Care to preserve it.

V.

*Violet Morian.*

*Violet Morian*, or *Canterbury Bells*, come up the first Year; the whole Plant dies as soon as the Seeds are ripe, of which 'tis raised, which should be sown in *April*, and afterwards removed where the Plants may stand to bear Flowers.

W.

*Wall Flowers.*

*Wall Flowers* are of several sorts, as the common Ones, the great single Ones, the great double Ones, the single White, the double White, the double Red, and the pale Yellow, all which sorts flower about the latter end of *March*, and in *April* and *May*. They are increased or continued by Slips planted in *March*, which should be set against a South Wall, whereunto they should be fastened and defended from Frosts and hard Weather, especially the double Ones.

*Wolfs-Bane.*

*Wolfs-Bane* is an early Flower, and may be removed at any time. 'Tis increased by parting of the Roots.





## B O O K X V I.

Chap. I. *Of Fruit-Trees.*

Having treated of the Kitchen-Garden, I shall next consider the Orchard, there being nothing more profitable than the Planting of Fruit-Trees; of which *Worcestershire, Herefordshire, Gloucestershire, Kent*, and many other Places, can give us ample Instances: And therefore it will be necessary, more particularly, to consider the Improvement that is to be made of this part of Husbandry, and the Advantages of it, which consist in many Particulars. As,

*First*, In the Universality of it, there being hardly any Soil, but one sort of Fruit-Trees or other may be raised on them, especially if judiciously managed.

*Secondly*, The use of Fruit is also Universal, both for eating and drinking, there being hardly any Places, where, of late Years, Fruit is not much made use of, especially the Juice for Cyder; which being made of good Fruit, and well prepared, is a most delicious wholesome Liquor, and most natural to our *English* Bodies, there being no County in *England* that hath afforded longer lived People than the Cyder Counties. The greatest Inconvenience that attends it, is, that it



is a very ticklish Liquor, that requires a great deal of Art and Skill to manage, as I shall have occasion to shew hereafter.

*Thirdly*, In the Charges and Expences of it, which are very small, especially if compared with that of other parts of Husbandry, there being hardly any more required than the trouble of gathering them, after a few Years at first, which is a very inconsiderable Charge to the Profit and Advantage that accrues to the Owner afterwards. Mr. *Hartlib*, in his Legacy, telling us of the Benefit of Fruit-Trees, says,  
“ That they afford curious Walks, Food for Cattle  
“ in Spring, Summer, and Winter, Fuel for the Fire,  
“ Shade from the Heat, Physick for the Sick, Refresh-  
“ ment for the Sound, Plenty of Food for Man, and  
“ that not of the worst, and Drink also of the best,  
“ and all this without much Labour, Care, or Cost.

So that considering the great Expence of the other parts of Husbandry; as also, the Charge of Plowing, Sowing, Reaping, Inning, and Thrashing of Corn, it will come much short of the Profit of Fruit-Trees; nay, many times Fruit amounts to more than Corn will yield, though the Charges were not deducted.

And I cannot but think Fruit-trees a great Improvement of the Land where they are planted, in that the Grass which grows underneath them will be forwarder in Spring than any other, and if mowed will yield twice the quantity of Hay: But the mowing of Orchards being prejudicial to the Trees, I shall rather advise the keeping of it short fed with Cattle the forepart of the Summer (especially if your Plantation is so large that you cannot keep it constantly dug) which the Cattle will then eat as well as other Grass; and if it should grow rank, and get a head of you the latter part of the Year, let it but stand till the Frost nips it, and the Cattle will be glad of it: But I think Trees may be so planted both in Orchards and Fields as only to shade the Grass, and prevent the burning of it in Summer, and to drop on the Grass but very



little, which is the only occasion of its Sourness, as I shall endeavour to shew afterwards. And that the Leaves of Trees are a very great Improvement of Land, may be seen by small Inclosures, which are commonly richer and more fruitful than large Fields adjoining to them, tho' of the same Soil; of which also Woods are an evidence, by the Improvement they make of any sort of Soil they are planted on. And that Fruit-trees are a great Improvement of Land, is the Opinion not only of the Ancients, who have composed many large Volumes to encourage this Work, giving it the greatest Encomiums, and preferring it before most other Employments; but likewise of Mr. *Blith*, Mr. *Austen*, and all others that have writ lately on this Subject, in that they cause Land to yield a double Crop, and increase the Advantage of its common Produce of Grass too. And besides the Advantage that accrues to the private Owner, it would be of benefit to the Publick to have Fruit-trees much more propagated than they are, in that it would hinder the vast Consumption of *French* Wines, which is the enriching of a Foreigner, by a Trade very prejudicial to this Nation, and instead of it might procure to us a considerable foreign Trade, of no less Advantage than the other has been prejudicial. In order therefore to advance and promote this useful part of Husbandry, I shall first begin with the Seminary and Nursery, as what is the first Work to be taken care of where you have not the opportunity of buying Trees, or that you design the raising of them your self.

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Chap. II. *Of the Seminary and Nursery for Fruit-Trees.*

THE Seminary and Nursery of Fruit-Trees is to be ordered much after the same way as is before described for Forest-Trees: As first, You must towards



*October* cleanse the Ground of Weeds, Roots, &c. which you design for this purpose: And note, that wet or very stiff Clay, and Land rich with Dung, is not good for this Use. Make the Mould very fine, and where you can get Crabstocks enough in the Woods, you may plant your Nursery with them; but if your Nursery be large, and they are hard to get, your dependency must be upon those you raise in your Seminary, which are esteemed the best. The way of doing of which, is to keep the Stones of such Fruit as are early ripe in Sand till *October*, and then stretching of a Line cross your Beds, if you make Beds for them, prick holes by it about a hand's breadth distant one from another, setting of the Stones about three Inches deep; and having finished one row, remove your Line to another, which must be about a Foot distance from the former: And so you may go on with your setting of them if you raise your Seeds on Beds; but if not, your Rows must be two Foot or more distant from one another, that so you may have liberty to go between to weed them, observing to keep each sort by themselves. All kind of Nuts, &c. may be set in the same manner: And for Stocks raised from the Seeds of Kernels, of Apples, Pears, or Crabs, some propose this Method, which is, after having made any Cyder, Verjuice, or Perry, to take the Must, which is the Substance of the Fruit, after the Juice is pressed out, and the same Day, or next after, before it heats, have the Seeds sifted out of it with a Riddle, on a clean Floor or Cloth, which sow as soon as may be upon Beds of fine Earth very thick, for some being bruis'd in the grinding or pounding, and others not being ripe, many will never come up; upon them sift fine Mould about two Fingers thick, laying White-thorns or Furze on them till the Ground is settled, to prevent the Birds or Fowls from scraping of them up: And, to keep them warm in the Winter, lay some Fern or Straw on them, which you must be sure to remove in Spring, before the Seeds begin



begin to shoot, which is commonly in *May*, and likewise to keep them well weeded; and if the Summer happen to be dry, they may be sometimes watered. Be careful likewise to set Traps for the Moles and Mice, which are very greedy of them; or you may, as some say, poison the Mice with pounded Glass mixed with Butter and Oatmeal and cast in bits upon the Beds.

*Crab-stocks.* The best Stocks to graft on are those that are raised of the Kernels of Wildings, and Crabs of the most thriving Trees, tho' in *Herefordshire* they reckon the Gennet-Moyl, or Cydodine Stock (as they call it) to be the best Stock to preserve the Gust of any delicate Apple; it being observable, that the Wild-stock enlivens the dull Apple, and the Gennet-Moyl sweetens and improves the over-tart Apple; but that the Tree lasts not so long as if grafted on a Crab-stock; and tho' the Fruit doth always take after the Graft, yet it is something altered by the Stock, either for the better or worse.

To be furnished with such variety of Stocks as is necessary for the several sorts of Fruit-trees that you are to raise, the Seminary ought to be filled with such as are raised of Peach-stones, Plumb-stones, Cherry-stones, Quince-stocks, &c. or of such as are raised of Suckers from the same, which are as good according to what each sort of Tree requires; of which I shall give an Account hereafter.

*Quince-stocks.*

But the best and most expeditious way to raise a great quantity of Quince-stocks for your Nursery, is to cut down an old Quince-tree in *March* within two Inches of the Ground; this will cause a multitude of Suckers to rise from the Roots. When they are grown half a Yard high, cover them a Foot thick with good Earth, which in dry times must be watered; and as soon as they have put forth Roots in Winter, remove them into the Nursery; where in a Year or two, they will be ready to graft with Pears.

Plumb-



Plumb-stocks and Cherry-stocks may be raised <sup>Plumb-</sup> from Suckers as well as from Stones, and also the same <sup>stocks.</sup> way, as is above directed for Quinces, only you must have regard to the kinds from whence they proceed, because of the sorts you graft or inoculate on.

Cherries may be grafted on Plumbs, and Plumbs on Cherries, or Apples, or Pears, and they will take and grow the first Year; but they are apt to die the next; and therefore if a *Scion* were taken from the first Year's Shoot, and grafted again on a proper stock, I am apt to think some Improvement might be made by it.

Pear-stocks may also be raised of Suckers, and <sup>Pear-stocks.</sup> transplanted like the former; but those that are raised of Seeds or Stones are esteemed much better than those raised from Suckers or Roots.

These Stocks when they are two Years old, or <sup>Removing</sup> one Year, according to some, are best to be removed <sup>of Stocks.</sup> into the Nursery, tho' they are never so small, provided they make but large Shoots; whereafter they come to make strong Shoots, they may be grafted, inoculated, &c. according to their Nature, and the Use you design them for, observing to cut off the down-right Roots, and the Tops and side Branches of the Plants, leaving of them about a Foot above the Ground, and letting neither the Roots be too long, nor set too deep, because they will be removed afterwards with the more ease: And it is necessary to remove Seed-plants often as well as Forest-trees, because by that means they get good Roots, which otherwise they thrust down only with one single Root, nor will they bear well without it: And also all stone-Fruit should be sown quickly after gathering; for if you keep them long after, they will be two Years before they come up; if they have not all the moisture of the Winter to rot the Shells, the Kernel will not come up. And observe to set the biggest and least by themselves in different places.



Fruit-Trees being of several kinds, and raised and increased several ways, as by grafting, inoculating, or budding, some by Seeds or Nuts, and others by Layers, Cuttings, Suckers, Slips, &c. according to the nature of them; and you having furnished your self with several sorts of Stocks for these Purposes: I shall in the next place endeavour to shew the manner of using them, and the particular Ways and Methods used for the raising of each several sort of Trees, and begin with Grafting.

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### Chap. III. *Of Grafting of Trees.*

**C**HOOSE your Grafts from a good bearing Branch, and from an old Tree rather than a young one, and covet not one that is too slender, lest the Sun and Wind dry it too much, and cause it to wither. The best Scions are reckon'd such as are of the last Year's Wood, and that have some of the former Year's Wood to them, which is stronger to put into the Stock than the last Year's Wood, and is reckon'd to advance the bearing of the Graft; but a Graft only of the last Year's Shoot will do very well; tho' in *Herefordshire* they commonly chuse a large Graft: However, those Scions are esteemed the best, whose Buds are not far asunder, which usually determines the length of the Graft.

And as the Stock is more or less thriving, and is capable of yielding of more or less Sap, so let the Graft have more Buds; but ordinarily three or four are sufficient. I am told that a Scion grafted with the top on, will bear sooner than if the Top be cut off.

And tho' you may graft and inoculate at most times of the Year, either by beginning early in the Autumn, or by budding in the Summer; yet the principal time for Grafting is the Month of *February*, for Cherries, Pears, Plumbs, and forward Fruits, and  
*March*



*March* for Apples. Mild open Weather is best, and most propitious for this Work, but by no means graft in wet Weather; and if you stay till you can be pretty certain of the Frosts being over, tho' it be to the beginning or middle of *April*, if 'tis a late Spring, it will be the better.

Observe that a Graft cut some time before, and stuck in the Ground, and then grafted at the rising of the Sap, takes better than those that are grafted so soon as cut, and Grafts from an old Tree should be taken sooner than from a young one.

*Note also*, that the Scions or Grafts of Plumbs or Cherries are not to be cut so thin as those of Apples or Pears.

As to the Success of Grafting, the main point is to join the inside of the Bark of the Scion and the inside of the Bark of the Stock together, that so the Sap that runs between the Bark and the Wood, may be communicated from the one to the other, especially towards the bottom of the Scion.

Choose the straightest and smoothest part of the Stock for the place where you intend to graft, but if the Stock be all knotty or crooked (which some esteem no Impediment) rectifie it with the fittest posture of the Graft you can; and if your Stock be small, Graft it about six Inches above the Ground; but if it is large, and where Cattle come, it is best to place it above their reach: In which way of Grafting there is a great Advantage to some sort of Apples, in that it causes them to partake more of the Sap of the Crab, which makes the Fruit of a sharp brisk Taste, and much helps sweet Apples, and is a particular Advantage to Golden-Pippens; tho' for young Trees for Standards it's not so practicable, because Trees so grafted cannot be so well removed: But if your Stock be removed it should stand at least three Years before 'tis grafted, except it makes very large Shoots the second Year.



Graft your Scions on the South-west side of the Stock, because that is the most boisterous Wind in Summer: by which means the Wind will blow it to the Stock, and not from it, which is the way that the Graft will best bear the Force of it: but as to this Point, the Shelter that the Grafts have in their standing is chiefly to be regarded.

Be careful that the Rain get not into the Cleft of your young grafted Stocks, but keep them clay'd 'till the Bark is grown over them, and leave not the Grafts above four or five Inches in length above the Stock, because its being long occasions its drawing more feebly, and exposes it more to the shocks of the Wind, and the hurt of the Birds.

Only the Gennet-Moyl is commonly propagated by cutting off the Branch a little below a Bur-knot, and setting of it without any more Ceremony; but if they are grafted first as they grow on the Tree, and when they have cover'd the Head, are cut off below the Bur, and set, it is much the best way; only in the Separation you should cut a little below the Bur, and peel off or prick the Bark almost to the Knot. And thus if the Branch have more Knots than one, you may graft and cut off yearly 'till within half a Foot of the Stem, which you may graft likewise, and so let it stand.

To perform this Work well, it is necessary to be provided with a good strong Knife, with a thick Back, to cleave the Stocks with; a neat small Hand-saw, to cut off the Head of the large Stocks; a little Mallet and a grafting Chisel, and a sharp Pen-knife to cut the Grafts. You must likewise have a stock of Clay well mix'd with Horse-dung to prevent its freezing, and with Tanner's Hair to prevent its cracking; Bals-strings or Woollen Yarn to tie Grafts with, and a small Hand-basket to carry them in; with such other Instruments and Materials as you judge necessary, according to the way and manner of grafting that you design to use, which is perform'd several ways; as,

First,



First, By grafting in the Cleft, which is the most <sup>Cleft</sup> known and ancient way, and the most used for the <sup>grafting</sup> middle-siz'd Stocks: The way of doing of which is, first to saw off the Head of the Stock in a smooth place, and for Wall-trees or Dwarf-Trees to graft them within four Fingers of the Ground, and for tall Standards higher, as you think convenient, or your Stocks will give way to do. Pare away with your Knife the roughness the Saw hath left on the Head of the Stock, and cleave the Head a little on one side of the Pith, and put therein your grafting Chisel, or a Wedge, to keep the Cleft open, which cut smooth with your sharp Knife, that the top may be level and even, except on one side, which must be cut a little sloping; then cut the Graft on both sides smooth and even from some Knot or Bud in form of a Wedge, suitable to the Cleft, with a small shoulder on each side; which Graft so cut, place exactly in the Cleft, so as that the inward Bark of the Scion may join to the inward part of the Bark, or Rind of the Stock closely, wherein lies the principal skill and care of the Grafter, if he expects an answerable Success of his Labour, as was said before: Then draw out your grafting Chisel, or Wedge; but if the Stock pinch hard, lest it should endanger the dividing of the Rind of the Graft from the Wood, to the utter spoiling of it, let the inner side of the Graft that is within the Wood of the Stock be left the thicker, that so the woody part of the Graft may bear the stress, or rather leave a small Wedge in the Stock to keep it from pinching the Graft too hard, and then you may leave the outside of the Graft a little thicker, especially in smaller Stocks. Cover the Head of the Stock with temper'd Clay, or with soft Wax, to preserve it not only from the extremity of the cold and dying Winds, but principally from the Wet.

The second way of grafting, and much like unto the former, is grafting in the Rind or Bark of the <sup>Rind</sup> greater Stocks, and differs only in this, that where <sup>grafting</sup> you



you cleave the Stock and fasten the Grafts within the Cleft in the other way; here with a small Wedge of a flat half-round Form, cut tapering to a thin point, made of Ivory or Box, or other hard Wood, you only force the Wedge in between the Rind and the Stock, till you have made a Passage wide enough for the Graft; after the Head thereof is sawn off, and the roughness pared away, then you are to take the Graft, and at the shoulder or gross part of it cut it round with your small Grafting-knife, and take off the Rind wholly downwards, preserving as much of the outward Rind as you can; then cut the Wood of the Graft about an Inch long, and take away half thereof to the Pith, and the other half taper away like to the Form of the Wedge, set it in the place you made with your Wedge between the Bark and the Stock, that the shouldering of the Graft may join closely to the Wood and Rind of the Stock, and then with Clay and Horse-dung cover it as you do the other.

This way is with most conveniency to be used when the Stock is too big to be cleft, and where the Bark is thick. Here you may set many Grafts in the same Stock with good success; and the more you put in, the sooner the Bark will cover the Wound.

*Whip  
grafting.*

The third way of Grafting that is made use of is to be performed somewhat later than the other, and is to be done two ways; First, By cutting off the Head of the Stock, and smoothing of it, as in Cleft-grafting; then cut the Graft from a Knot or Bud on one side sloping, about an Inch and a half long, with a shoulder, but not deep, that it may rest on the top of the Stock; the Graft must be cut from the shouldering smooth and even, sloping by degrees that the lower end be thin; place the shoulder on the head of the Stock, and mark the length of the cut part of the Graft, and with your Knife cut away so much of the Stock as the Graft did cover (but not any of the Wood of the Stock :) place both together, that the cut parts  
of



of both may join, and the Sap unite the one in the other; and bind them close together, and defend them from the Rain with tempered Clay or Wax, as before.

The other way of Whip-grafting is, where the Grafts and the Stocks are of one equal size: The Stock must be cut sloping upwards from one side to the other, and the Graft after the same manner from the shoulder downwards, that the Graft may exactly join with the Stock in every part, and so bind, and Clay or Wax them, as before.

These ways of Whip-grafting (especially the first) are accounted the best; first, because you need not wait the growing of your Stocks, for Cleft-grafting requires greater Stocks than Whip-grafting doth: Secondly, This way injureth less the Stock and Graft than the other: Thirdly, The Wound is sooner healed, and upon that account better defended from the nipping of the Weather, which the cleft Stock is incident unto: Fourthly, This way is more facile both to be learned and performed.

The fourth way of Grafting is by Approach or *Grafting by Approach*. Ablactation: And this is performed later than the former ways; to wit, about the Month of *April*, according to the forwardness of the Spring. It's to be done where the Stock you intend to graft on, and the Tree from which you take your Graft, stand so near together that they may be joined: Upon which account it is commonly practised upon Orange and Limon Trees, and other rare Plants that are preserved in Cases, and may upon that account be joined with the more facility. Take the Sprig or Branch you intend to graft, and pare away about three Inches in length of the Rind and Wood near unto the very Pith; cut also the Stock or Branch on which you intend to graft the same, after the same manner, that they may evenly join each to other, and that the Saps may meet; and so bind and cover them with Clay, or Wax, as before.



As soon as you find the Graft and Stock to unite, and to be incorporated together, cut off the Head of the Stock (hitherto left on) four Inches above the binding, and in *March* following the remaining Stub also, and the Cion or Graft underneath, and close to the grafted place, that it may subsist by the Stock only.

Some use to cut off the Head of the Stock at first, and then to join the Cion thereunto after the manner of Shoulder-grafting, differing only in not severing the Cion from its Stock. Both ways are good, but the first most successful. This manner of Grafting is principally used for such Plants as are not apt to take any other way; as, for Oranges, Limons, Pomegranates, Vines, Jessamines, *Althæa Frutex*, and such like. By this way also may Attempts be made to graft Trees of different kinds one on another, as Fruit-bearing Trees on those that bear not, and Flower-trees on Fruit-trees, and such like.

These are the most usual ways of Grafting; some others there are, but they differ very little from the former; and where they differ, it's rather for the worse, and therefore not worth the mentioning.

Those Grafts that are bound you must observe to unbind towards *Midsummer*, lest the Band injure them.

Where their Heads are so great that they are subject to the Violence of the Winds, it is good to preserve them by tying a Stick to the Stock which may extend to the top of the Graft, to which you may bind the Graft the first Year; The best thriving Grafts are most in danger; afterwards they rarely suffer by the Winds.

Grafts are also subject to be injured by Birds, which may be prevented by binding some small Bushes about the tops of the Stocks.

*Root  
grafting.*

There is another way of Grafting that hath not been so long in use as the former, which is, to take a Graft or Sprig of the Tree you design to propagate,



and a small piece of the Root of another Tree of the same kind, or very near it, or the pieces of Roots that you cut off of such Trees as you transplant, and Whip-graft them together; and binding of them well, you may plant this Tree where you have a mind it shall stand, or in a Nursery, which piece of Root will draw Sap and feed the Graft, as doth the Stock the other way.

Only you must observe to unite the two But-ends of the Graft and Root, and that the Rind of the Root join to the Rind of the Graft.

By this means the Roots of one Crab-stock or Apple-stock will serve for twenty or thirty Apple-grafts; and in like manner of a Cherry or Merry-stock, for as many Cherry-grafts; and so of Pears, Plumbs, &c.

Thus may you also raise a Nursery of Fruit-trees instead of Stocks, by planting of them there while they are too small to be planted abroad.

This is also the best way to raise tender Trees that will hardly endure grafting in the Stock, because this way they are not exposed to the injuries of the Sun, Wind and Rain.

It is also probable, that Fruits may be meliorated by grafting them on Roots of a different kind, because they are more apt to take this way than any other.

The Trees thus grafted are reckoned to bear sooner, and to be more easily dwarfed than any other, because part of the very Graft is within the Ground, which being taken off from a bearing Sprig or Branch, will blossom and bear suddenly, in case the Root be able to maintain it.

The only Objection against this way is this, that the young Tree grows slowly at the first, which is occasioned by the smallness of the Root that feeds the Graft; for in all Trees the Head must attend the increase of the Roots, from whence it hath its Nourishment.



Nevertheless this Work is easily perform'd, Roots being more plentiful than Stocks, and may be done in great quantities in a little time within Doors, and then planted very easily with a slender Dibble in your Nursery, and will in time sufficiently recompense your pains. If you transplant a Tree that the grafting place is not well grown over, place the back of the Graft to the South, and the cut to the North, and it will cause it to heal the better. Slips are not so good to plant or graft on as Seedlings, because they often mistaking of Root; and if they do grow, the Root being part of the old Wood, it often doats, and rots in the Ground, and grows but slowly.

But for the Encouragement of those that desire to be furnished with good Fruit, and good Bearers, Grafts may be carried with a little care either by Sea or Land, and will keep good from *October* to *March*, provided they are buried in Earth, and kept moist, tho' without any thing put to them: They will keep a great while, so as that I my self had some Pear-Grafts which grew well that were sent from *Paris*: Only if you find them any thing dry, lay them as soon as you receive them, in Water twenty four hours, and afterwards in moist Earth; or you may stick the large ends of them in Clay tying a Rag about them to keep it from falling off, and to wrap the other end in Hay or Straw Bands, which will secure them from the Wind and Bruises, and is a good way for transporting of them.

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#### Chap. IV. *Of Inoculation.*

**I**Noculation is by some preferred before any of the ways of Grafting before treated of, and differs from the other ways, in that it is performed when the Sap is at the fullest in Summer, and the other sorts of grafting are before the Sap ascends, or at least in any great quantity. Also by this way of inoculating several sorts of Fruits and Trees may be propagated



pagated and meliorated, which by grafting cannot be done, as the Apricock, Peach and Nectarine, which rarely thrive any other way, because few Stocks can feed the Graft with Sap so early in the Spring as the Graft requires, which makes it frustrate your Expectation; but being rightly inoculated in the fulness of the Sap rarely fails.

The Stocks on which you are to inoculate are to be of the same kind as before, and in the next Chapter is directed to graft on.

The time for this Work is usually from *Midsummer* to the middle of *July*, when the Sap is most in the Stock. Some Trees, in some Places, and in some Years you may inoculate from *Mid-May* to *Mid-August*. As to the time of the Day, it is best in the Evening of a fair Day, in a dry Season; for Rain falling on the Buds before they have taken will destroy most of them.

The Buds you intend to inoculate should neither be too young or tender, nor yet too old, but young ones are best; the Apricock Buds are ready soonest, they must be taken from strong and well-grown Shoots of the same Year, and from the strongest and biggest end of the same Shoots.

If Buds be not at hand, the Stalks containing them may be carried many Miles, and kept two or three Days, being wrap'd in fresh and moist Leaves and Grass to keep them cool: If you think they are a little wither'd, lay the Stalks in cold Water two or three hours, and that, if any thing, will revive them, and make them come clean off the Branches.

Having your Buds and Instruments ready for your Work, *viz.* a sharp pointed Knife or Penknife, a Quill cut half way and made sharp and smooth at the end, to divide the Bud and Rind from the Stalk, Woollen-Yarn, Bass-matt, or such like, to bind them withal; then on some smooth part of the Stock, either near or farther from the Ground, according as you intend it, either for a Dwarf-Tree, or for the Wall, or a Standard, cut the Rind of the Stock overthwart, and



from the middle thereof gently slit the Bark or Rind about an Inch long, in form of a T, not wounding of the Stock; then nimbly prepare the Bud by cutting off the Leaf and leaving of the Bark about half an Inch above and below the Bud, and sharpen that end of the Bark below the Bud, like a Shield or Escutcheon, that it may the more easily go down and unite between the Bark and the Stock: Then with your Quill take off the Bark and Bud dextrously, that you leave not the Root behind; for if you see a hole under the Bud on the inside, the Root is left behind, therefore cast it away and prepare another; when your Bud is ready, raise the Bark of the Stock on each side of the slit (preserving as carefully as you can the inner thin Rind of the Stock) put in with care the Shield or Bud between the Bark and Stock, thrusting it down until the top join to the cross-cut, then bind it close with Yarn, &c. but not on the Bud it self.

There is another way of Inoculation more ready than this, and more successful, and differs from the former only in that the Bark is slit upwards from the cross-cut and the Shield or Bud put upwards, leaving the lower-end longer than may serve; and when it is in its place, cut off that which is superfluous, and join the Bark of the Bud to the Bark of the Stock, and bind it as before, which sooner and more successfully takes than the other. In Inoculating you may put two or three Buds on a Stock.

You may also cut the edges of the Bark about the Bud square, and bind it fast, and it will succeed well; which is the readier way, and easier.

About three Weeks or a Month's time after your Inoculation you may unbind the Buds, lest the binding injure the Bud and Stock.

When you unbind them you may discern which are good and have taken, and which not; the good will appear verdant, and well coloured, and the other dead and withered.



In *March* following cut off the Stock three Fingers above the Bud, and the next Year cut it close, that the Bud may cover the Stock as Grafts usually do.

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Chap. V. *Of the Ways and Methods used for the raising of Fruit-Trees.*

HAVING already shewed how to furnish your Seminary with Stocks, and the method of Grafting, Inoculating, &c. of them; I shall in the next place consider the several sorts of Fruit-Trees, and what Ways and Methods are the best and most proper for the propagation of each of them. I shall begin with the Apple, as it deserves the preheminance, both upon the account of its Universality and Usefulness, being both Meat and Drink, it may be had at all times of the Year. Of Apples there are great Variety, and for several Uses; but as Apples and Pears, and other sorts of Fruit are of several kinds, I shall have occasion to mention a great number of them hereafter, and at present, only take notice of some peculiar Apples and Pears proper for Cyder and Perry.

Apples are commonly raised by grafting upon the Crab, that being esteemed the best and hardiest Stock for them, and the least subject to Canker; they take best when grafted in the Cleft or Bark, except the Gennet Moyle, which will grow of Burrs, as I have mentioned before, and the Codlin, which may be raised of Suckers or Slips, tho' indeed most of our best Fruit has been produced from the Kernel, being a kind of Wilding, as the Red-streak, the Golden Pippin, &c. are reported to be; but it being very rare that any can be raised this way, most Kernels producing Fruit of a wild, austere, sharp Taste, tending rather to the wildness of the Stock on which the Tree was grafted, than that of the Graft; altho' many of them may seem fair, yet they want that briskness of Spirit, and are more woody than the grafted Fruit, being also much longer before they bear, and are more unfruitful; for the often grafting of Trees up-

*Apples,  
how raised.*



on the same kind, is esteemed a meliorating of them, which hath occasioned many to endeavour the raising of new kinds of Apples, and other Fruits, by grafting of them upon different Stocks, which way I think deserves Incouragement; if any should attain to any sort of Graft of this kind, I think it would be convenient at the second, or at farthest, at the third Year's growth, to graft it upon a Stock of a more natural kind to it, for Nature delights more in an advance than going backwards. By a failure in this Point I lost several Grafts that I believe would have been of Advantage had I been aware of the sudden Blast that took them the third Year. I think Experiments of this kind more likely to succeed by trying a dry or an insipid Fruit upon a pungent vigorous Sap, than the contrary; but for the gaining of a new Species of Apples, tho' 'tis rare to have them take, yet I think the doing of it by Seeds and Kernels the most likely way, because many have been procured that way. I have obtained four several sorts of this kind my self. I am told that Apples may also be raised of Layers; if you cut the Layer when you put it in the Earth, as you do the Layer of a Gilliflower, and let them be two Years in the Ground before you take them up, and that such will bear sooner than those that are grafted.

The Golden Runnet is the most certainest Bearer of any Apple I have met with in any Soil, and in all Climates, and as 'tis a Summer Fruit it must be the properest of any for the Northern Parts, but 'tis despis'd because 'tis apt to be mellow and not keep well; but I have observed that those planted in the Northern Climates, and upon the lightest Soil keep best, and are the firmest Fruit, especially if the Fruit has any thing of Russet and specks upon it. West Winds are the most blasting of any to Fruit, and so those Places that are most exposed to them are the oftenest blasted; but Blasts, as they happen but seldom, they make me the more apt to think that the not bearing of Fruit is occasioned from a not suiting of the Fruit and Soil to one another than any thing else; and therefore what I would advise every one

that



that intends to plant an Orchard, is, to enquire what Fruit bears best in the Neighbourhood where is the same Soil, and accordingly to plant most of that sort.

Next unto Apples I think Pears may come in the *Pears how* second place, and would be much more useful than *raised.* they are, were such care taken to improve the Juice of them as might be; in one thing they are to be prefer'd, that they prosper in cold, moist, hungry, stony and gravelly Land, where Apples will not bear so well; they are best grafted the same way as the Apple, and upon the wild Pear-stock raised of their Kernels for Standards; but for Dwarf or Wall-Trees the Quince-stock is esteem'd the best, but then they should be planted in moist Ground; they will grow likewise when grafted on the White Thorn, but not so well as on the former; they may likewise be budded on their own kind, and if Winter Pears, or any sort of latter Fruit, be grafted on the earliest Pears, or earliest Fruit of the kind, it will forward and help them very much. They may be grafted when the blossom is on them.

Cherries are a fine Summer-Fruit, and are of several *Cherries,* sorts; they do best grafted on the Black-Cherry-stock, *how raised.* or the Merry-stock, which may be raised in great quantities from Cherry-stones; Suckers also from the Roots of the Wild or Red-Cherry, will do well; they are commonly grafted about a Yard from the Ground by whip-grafting; they may likewise be budded or inoculated on their own kind.

Plumbs are of several sorts, and commonly cleft- *Plumbs* grafted on any Stocks of their own kind, except the *how raised.* Damascen; but one of the best sorts to graft them on is the Pear-Plumb; tho' I have often found them to prove well raised only from the Stones, especially Damascens.

Medlars may be cleft, or Stock-grafted, on the White *Medlars.* Thorn, but prove best on the Pear or Quince-stock.

Filberts may be cleft-grafted on the common Nut, *Filberts.* and Servises on their own kind, or propagated by Suckers, Layers, or Seeds. Quinces



*Quinces,  
how rais'd.*

Quinces may be cleft-grafted on their own kind, or raised of Slips or Layers, and of Cuttings; they delight in a moist Soil. If you have a Quince-Tree, which grows so low that you can by plashing, or otherwise bring it to the Ground, do it the beginning of the Winter, and cover it with Earth, except the two ends of the Boughs; and every Twig will put forth Roots, which being cut off and transplanted will make a Tree; they may be also Inoculated which will make them bear the sooner. If they are planted on dry Ground, they should be planted in *October*: They are better grafted in the Stock than in the Bark.

*Apricocks,  
how rais'd.*

Apricocks are usually inoculated in Plumb-stocks, raised either from Suckers that have not been grafted before, or Stones; those of the White Pear-Plumb are esteemed the best, and those of any other great White or Red Plumb that hath large Leaves and Shoots are very good for the budding of Apricocks or Peaches. I am told that an Apricock, inoculated on a Peach, mightily improves the Fruit. I have known Apricocks bear very well that were only raised of Stones, but their Roots are reckon'd very spungy, and so not apt to continue long. Apricocks do well also in Standards; but as they blossom very early against a Wall, so they are very much in danger from the Frosts, against which they should be shelter'd with Matts, or other shelter, when they are in Bloom. You may also plant them in several Aspects, and by that means have them ripe in several Seasons.

They thrive best on a light Soil if inoculated on a Plumb-stock; but the best for a heavy Soil are those inoculated on an Apricock-stock, raised of the stone.

In sowing Apricock-stones keep them in Sand till *October* is over before you set them; because if they are set early, as when the Fruit is ripe, they are apt to spring up before the Winter, and then being tender the Frost kills them.

Peaches



Peaches are of several sorts, and are raised the same *Peaches.* way with Apricocks, and delight in the same Soil, and do best grafted on Apricock-stocks.

Nectarines, delight in the same Soil as Apricocks *Nectarines.* and Peaches; they are raised by Inoculation, the best Stock for which is that raised of the Peach-stone.

Figs are of several sorts, they are multiply'd of *Figs.* Suckers, and delight in a warm moist Soil.

Figs may be increased by Cuttings, Layers, or Suckers, and are to be planted against a House or Wall, where they may have Sun to ripen them. They may be raised to the Wall like other Trees, but must not be pruned more than needs must.

If you plant some small Fig-Trees in Pots or large Boxes, as you do Orange-Trees, and put them in some House (from the beginning of *November* until *April*) without any Fire, or any other Curiosity, you may have early Figs, if when you set them out, you set them under a South-wall, and keep them watered once a Week. I am told that if you lay a quantity of Walnut-shells round the Roots of a Fig-tree, and cover them with good Earth till they rot, they will cause the Fig-tree not only to bear, but to produce large Fruits.

Orange and Limon Trees, in hot Countries are *Oranges.* raised of Slips, but they will not grow so here; they *and Limon* are commonly grafted or inoculated, or are raised by sowing their Pippins or Seeds in Boxes, and when they are two Years old transplant them in Cases, every one in a Case by it self fill'd with rich Melon-bed Mould mingled with Loam, refined and matured by one Winter Season; and when they can well support it, you may either inoculate or graft them by approach in the Spring of the Year. Be diligent to secure them from Cold, and commit them early to their shelter, where they may intirely be preserv'd from the Frost; you may give them a gentle Stow, and attemper the Air with a Fire of Charcoal during the extream rigour of the Winter, in case you suspect the Frost has at all invaded them. But



But so soon as the Spring appears, and the Frosts are entirely past, you may acquaint them with the Air by degrees, beginning first to open the Doors of the Conservatory in the heat of the Day, and shutting them again at Night; and so by little and little you may set open the Windows, and shut them again in the Evening till all danger is past, and then you may bring them forth and expose them boldly to the Air during all the Summer following.

As these Trees grow big you may change and enlarge their Cases, but be sure to take them out Earth and all, raising the stringy and fibrous Roots a little with a Knife before you replace them, supplying what their new Cases may want with the fore-described Mould. Some when they alter their Cases denude them of all the Earth, conceiving it exhausted and insipid, but it is to the extream prejudice of the Tree, and doth set it so far back that a Year or two will hardly recover it.

You may gather the Flowers every Day to prevent their knotting into Fruit, sparing only some of the fairest and best placed for Fruit, and as many as you conceive the Tree can well nourish.

The Spiders do extreamly affect to spread their Toils among the Branches and Leaves of this Tree, because the Flies so much frequent their Flowers and Leaves, which attract them with their Redolency and Juice; to remedy this, use such a Brush as is made to cleanse Pictures withal from Dust, but treat them tenderly.

*Almonds.* Mr. *Hartlib* condemns us much for neglecting the propagating of Almond-Trees, which (saith he) grow very well and bear good Fruit, he having, as he says, seen divers Bushels on one Tree in his Brother's Orchard; they grow large and upright, and need not the help of a Wall. The Almonds are in some sweet, and in others a little bitter; but I am told, that often removing of them makes them grow sweeter; the Tree is chiefly received for the Beauty of its Flowers, which being early, and of a fair, pale, reddish Colour, make a fine shew in a Garden. They



They are raised by setting of the Nut in the Shell in the Month of *October* or *February*, which should be laid in soft Dung, a Day or two before you plant them; and when they come up they should be watered once a Week, till they grow pretty large: they may also be raised by Slips from the Roots; they delight in the Sun, and a dry Soil; and grow barren in a fat one.

You may increase several sorts of Fruits, by making choice of a convenient Branch, or Shoot of an indifferent size; which about *Midsummer*, sometimes a little sooner, and sometimes later, according as the Weather proves, when the Sap is very high, which in some Trees is sooner and in some later; a little above the place you think best, apply a pretty quantity of well-tempered Mortar round about it, and make such provision with convenient tying of a Cloth about it as may cause the Mortar not to fall off, either by the washing of the Rain or otherwise, and cover it with Clay, which form so on the Top, that it may a little receive the Moisture in case of Rain, and then cut the Bark off round about the Branch under the place where the Clay is, about two or three Inches wide, and in the Clay or Mortar, it will either put forth root, or prepare it so for rooting, that being cut off about the beginning of Planting-season, it will grow, which sometimes may be done about the latter end of *September*, or beginning of *October*. You must observe in planting of it to proportion the Top to the Root, and not to leave too much for the young Root to feed, and plant it in good Ground with the Mortar on, which is to be made of Clay, fine Earth, and a little Dung, which must be clapped to the bared place as well as to the Bark that is about it, and the Ball made as big as a Foot-ball. It must be set pretty deep, and kept often watering.

Pear-Trees have commonly more brittle Roots than Apple-Trees, and therefore more care should be had in taking of them up, and the Roots of such Apple-Trees,



Trees, or Stocks as have been raised of Kernels, are likewise more brittle than those raised of the Crab or Wilding.

Medlars are raised best by grafting on a Servise Tree; the great Dutch Medlar is the best, and a good bearer; they are also raised of the Stone and sometimes from Suckers, but when sowed they require a great deal of time, before they bear: Neither is the Fruit so large as when grafted. They are commonly planted near the Water, but they thrive and bear well in other places.

### Chap. VI. *Of Dwarf, Wall and Standard Trees.*

**Y**OUR Trees being grafted or inoculated on proper Stocks, the next thing to be consider'd, is which are to be for Dwarfs, Walls and Standards, that a proper Method may be used about each sort, the ordering of which consists mostly in the pruning of them: Dwarf Trees must be pruned so as to make them hollow, and to branch low into as many Branches as you can: The same care must be taken of such as are to plant against Walls; only as the one are to grow round, the others are, as much as you can, to be made to grow flat, that they may spread the better on the Wall; but for the Standards, as soon as you can, you are to reduce them to one Branch, which when it comes to the intended height you desire, you must cut the top of it to cause it to head at that place, always considering the strength of the Body, which if it have strength enough you may prune it clear up: but if weak, leave according to its strength, more or less Branches to grow out of the sides, and check the Sap which strengthens the Body: and so will the pruning of the Head, when once the Body is of a good strength.



By this means being provided with all sorts of Trees, it will in the next place be convenient to consider the Methods to be used for the planting of them out, in doing of which it will be necessary to know, first, how to order the Ground, and secondly, how to transplant the Trees.

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Chap. VII. *Of the manner of cultivating Ground for an Orchard.*

THE natural Soil of an Orchard is more to be regarded than that of a Garden, because the Garden Product rooteth but shallow, and so may easily be manur'd to the depth that is requir'd for Garden-Commodities; but Fruit-Trees growing large and rooting deep, ought to have a deep and rich Soil, where your conveniency will allow of it.

And if the Land that you intend to plant be a Turf, or Green-sward, you will do well to plow it two Years before you set the Trees in it, to make it mellow and loose; and the deeper you plow it the better, because the Trees will have the better Opportunity to root; and if you lay Dung or Manure on it, the plowing will mix it the better with the natural Soil, and it will be much the better to dig if you design to set Beans, Pease or other Commodities with your Trees, which is the best way of advancing the Growth of your Trees; and if you would have your Trees to thrive, you must take care that your Trees be not too near together, and that no sort of Plants be near them, which may deprive them of their Nourishment, or any way hinder those Refreshings and Helps that they might otherwise receive by the Rain or Dew.

In an Acre of Land may be planted at forty Foot distance two hundred and fifty six Trees, at fifty Foot distance one hundred and sixty nine, and at sixty Foot distance one hundred and twenty one Trees.



Take care to keep the Earth about your Trees always light and clean, and often cultivated, so as to mend and clean it as often as it requires.

Earth that is hot or dry must be dug or tilled in Summer-time, either a little before or whilst it rains, or soon after; at which time you can neither Till it too often nor too deep, because the doing of it in hot Weather will kill such Herbs or Flowers as grow in it, except they are watered; but cold, strong and moist Earth is best to be tilled in dry Weather, only there are some Grounds that will not work till Rain comes.

The frequent stirring of the Earth prevents its goodness from being wasted by the growth and nourishment of ill Plants; but such stirrings are not enough without pulling of the Weeds up: For ill Weeds that usually grow in Summer and Autumn, multiply without end if they are suffer'd to run to Seed. At the time that the Trees blossom and the Vines shoot, the Earth is not to be meddled with.

To dry Earth a large Culture or Tillage may be allow'd the beginning of Winter, and the like, as soon as it is past, that the Snow, and Rain of the Winter and Spring may easily sink into the Earth; but to strong and moist Earth a small Tillage in *October* only, to remove the Weeds, is best, and to give a large Tillage in Spring when the greatest Rains are over; and if you Trench heavy moist Ground against Winter, your first breaking of it up ought to be slight.

But if your Orchard is situated in a sandy or dry Ground, endeavour by the help of some Gutters to carry off all the Water that falls in hasty Showers to those Places that are manur'd, that none of it may be unprofitably wasted in the Walks or Allies, but if your Soil is strong and fat, drain it off from the Orchard as much as you can. And if your Land lie flat, that wet is apt to stand upon it, or if 'tis a shallow Soil, you may something help it in plowing, by gathering



thering of the Land always up in and near the Place where you intend the rows of Trees shall afterwards stand ; which will make the Soil deep where they are to stand, and draw off the Moisture, as was said before.

Rain-water sinks not so deep into Land as Snow, and therefore in moist Land it is a good way to remove the Snow as much as you can from about your Trees.

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Chap. VIII. *Of the Transplanting of Trees.*

**I** Have already given several Directions for the Transplanting of Forest-Trees, which will serve for Fruit-Trees also, and therefore what I shall consider about Fruit-Trees at present, is the distance they are to be planted at, and what may tend to the making of them the more fruitful; the seldom bearing of Fruit being one of the greatest Discouragements that attends Planting.

As for Standards of Apples or Pears, I am not for planting of them nearer than forty Foot; which distance, if any one think too far for an Orchard, and that by the thriving of their Trees (especially while they are young) they shall sustain loss, I should rather advise them to plant Cherry-Trees, Codlins, Plumbs, &c. between, because in about thirty or forty Years time they will be decaying, and so by cutting them down will make way for the other Trees, the largest of Apple and Pear-Trees, and the room that they have being what I think doth much contribute to their bearing and thriving, in that they receive the more Benefit and Refreshment of the Sun and Air, and have the more room for their Roots to spread by their distance from each other, and the Fruit is much the better. But if you plant them in Fields or Pastures, fifty or sixty Foot distance will do well, because they will be less prejudicial to the Grass; but for the preventing of any Inconveniency that may come to Pasture-



Lands from the dropping of the Trees, I shall propose one thing that I have already hinted at, which is, to plant all your Trees in rows from East to West. Let the Trees and rows be forty Foot one from another, and let all the Trees, by pruning of them, be made to grow like a Fan, or to spread in the same Form as if they were to grow against a Wall, only in that the Stem must be taller: This I think will prevent the prejudice that the dropping of Trees will do to the Grass, and will shade the Land from burning, and improve it by the falling of the Leaves, and will also cause the Fruit to ripen much better than if they grew in the common Form, of which last Particular I have had the Experience of two or three Trees that I kept trimmed after the same manner on purpose for a trial.

Cherries, Plumbs, Quinces, and such like Trees, may be planted at fifteen or twenty Foot distance, which is sufficient.

It will be necessary at every three or four Years end to lay about aged Trees some Soil, especially Lime or Chalk, which is done by uncovering the Mould within a little of the Roots, and applying of it, and then covering of them again with Earth; the best Season for which Work is the beginning of Winter, that the Rains may wash it to the Roots before the heat of the Summer invades it.

*Wall-Trees.* But Wall-trees should be planted at such distances as the height or breadth of the Wall, the Nature of the Tree, and the Nature of the Ground requires; the higher the Wall, the nearer the Trees may be together; and the lower the Wall, the farther distance, that they may have room to spread in breadth where they want it in height; especially Vines, which require a more spacious and ample place to spread against than other Fruit, it being certain, that the more they spread the better they bear and thrive, which is contrary to the Opinion of all Foreign Parts: And the same may be observed of most other Wall-Fruit, especially



pecially Pears and Apricocks, upon which account I cannot but think most of our Walls too low, and our Trees commonly planted too thick. And,

Having occasion to find fault with the common sort <sup>Walls for</sup> of Walls for Fruits, it gives me an opportunity of <sup>Fruit.</sup> recommending the Proposal made by Mr. *Fatio* for sloping Walls, that so what is planted against them may lie exposed to the direct Beams of the Sun: This sort of Walls, breaking the Wind and reflecting the Sun-beams from one Wall to another, must be of great Advantage for the ripening of Fruit in our cold Climate; to which I shall only add an accidental Experiment made by a Friend of mine, who had a Wall, the Foundation of which being bad, obliged him on the planted side, between each Tree, to make But-tresses of about a Yard from the Wall, which caused his Fruit to ripen much sooner than it did before: His Wall stood a little facing to the Eastward of the South.

But to proceed to what I think the great Point to <sup>Of the</sup> be taken care of about Fruit-Trees, which is the Un- <sup>Unfruitful-</sup> fruitfulness of them, it being often many Years toge- <sup>ness of</sup> ther, that both Apples, Pears, and other Fruits fail, <sup>Trees.</sup> as we have of late experienced for seven or eight Years together; which Inconveniency being one of the greatest Discouragements that attends Planting, as I said before, it may not be amiss a little to consider the occasion of this Unfruitfulness, and likewise to propose some Remedies for the same. Now the Unfruitfulness of these Trees commonly proceeds,

*First*, From Blasts occasioned by the Winds, as <sup>Occasioned</sup> many times from the East-wind in the Spring, which <sup>by Blasts.</sup> coming after Rain, when the Blossoms are wet, and bringing of Frosts with it, shrivels up the Leaves of the Blossoms and spoils them. If a West-wind succeeds it commonly brings Caterpillars; the best Remedies against which are good Shelter, to prevent the Frosts; and the burning of Straw, Hawk, &c. to kill the other; but a great means to have Fruit all



Years, is where you have the Conveniency of different Situations, that so when a Blast comes by one Wind, you may have another under shelter from it; and tho' the South Aspect is the best for ripening of Fruit, yet the most constant bearing Orchard that I have met with, is an Orchard belonging to a small Farm I have in *Hertfordshire*, that is not above a Rood of Ground, which is situated on the side of an Hill that faces the North-East: The Soil is a kind of a yellow Tile-Clay, and the West-end of it is sheltered by the House, and the South-side by high Trees, but the North-side and East-end is wholly exposed to those Winds. But having a conveniency of several Situations where I now live, I may, when the Trees grow up, which I have lately planted, be able to give a better account of this Particular; for Experiments of this kind must rather be tried in the South Parts of *England* than North, especially for North or West Situations.

*Want of  
Rain.*

*Secondly*, The want of Rain just at Blossoming-time, often occasions the dropping off of the Blossoms for want of Sap to nourish them, especially in dry Grounds; and therefore I have heard of some in *Essex*, whose Orchards were upon a dry Soil, that have had great quantities of Fruit when all their Neighbours about them have failed, only upon this account, that they kept their Trees watered at Blossoming-time; and of a Gentleman, who had an Orchard planted on the side of a Hill that he could Water when he would, which hardly ever failed.

*Suiting  
Fruit to  
the Soil.*

The third occasion of Unfruitfulness is the not suiting of your Fruit and Soil together, a Point that deserves more particular Observations than I have been yet able to make, and what I would desire the Assistance of such in as are willing to promote this Work, being satisfied that not only some sort of Fruits bear better on some Soils than others, but also that they thrive much better; however, in the meantime I shall advise them that plant an Orchard, to enquire what

fort



fort of Soil their Neighbours Orchards are of, and what sort of Fruits bear best in those Soils, as I said before, and accordingly to stock themselves with that sort of Fruit.

But a great hindrance to a due enquiry into this useful part of Husbandry is the variety of Names that are in many Places given to one and the same Apple or Pear; and therefore when any one hath a good bearing Fruit, I would advise them to be sure of the Name of them from some experienced Gardeners, and then a certain Judgment may be made of them. And if you find the Ground wherein you plant your Fruit-Trees not suitable to the Nature of the Tree, it may be altered by applying of Earth, Clay or Sand of a different Nature to your Soil.

A fourth Reason of the Unfruitfulness of Fruit-Trees is the Barrenness of the Soil they are planted on, From barrenness of the Soil. for I cannot but think it as necessary to dung Orchards as Plowed Lands, that so the Dung may wash to the Roots of the Trees to nourish them; this I reckon was the reason of the fruitfulness of the Orchard mentioned by Mr. *Hartlib* in his Legacy, when he advised the turning of the Wash of a Sheep-common to the Roots of the Trees, which, he says, occasioned such a fruitfulness to an Orchard that belonged to a Farm that an Acquaintance of his held, that the Occupier got an Estate out of the Farm by it, which before was so dear rented, that it had like to have ruined him. And I knew a Farmer in *Kent* that used to say, that he had often observed it, that whenever he let his Hogs go into his Orchard unrun, to root about the Trees, and to dung them, he had always a Crop of Fruit; and it is certain, for Fruit-Trees no Dung is so good as Hogs-dung, which Mr. *Worlidge* confirms in his *Vinetum Britannicum*; and tho' they may spoil some Grass in Winter, it is easily levelled in Spring. Hogs-dung is likewise an excellent Medicine for a Canker.



*From Moss.*

*Fifthly*, Moss is very prejudicial to the bearing of Fruit-Trees; and is commonly occasioned by the coldness of the Land the Trees grow on, whether it is wet or dry, or their being planted too deep; and if it proceed from the coldness of the Land, lay Sea-coal Ashes, Horse-dung, &c. If from Moisture, drain the Land well; but if it proceed from deep planting, if they are small, it is the best way in very moist Weather to draw them up higher; but if they are too large, for that there is no remedy but replanting of them, or to plant new in their places. To cure the Moss, in *Staffordshire*, I am told, they burn off the Moss of their Trees about *December* with a wisp of Straw, but the common way is, to rub it off of young Trees with a Hair-Cloth, or to scrape it off with a wooden Instrument that may not hurt the Bark of the Trees. I knew one that had an Apple-tree very much run over with Moss, and he made a Styer under it, in which he fattened Hogs, and it cured it. But as Moss is sometimes caused from the want of Sap, which is the reason that old Trees are commonly more Mossy than young, it is good to lop off several of the Branches of such Trees, which will make them prosper the better, and be less Mossy; especially where Trees are Mossy that grow on dry Ground.

*Sixthly*, Many Trees run altogether to Wood and Branches, and seldom bear any Fruit; to remedy which Inconveniency, some propose hacking of the Tree, or to cut Crosses or other Stroaks upon the Bark, to give some check to the Sap; others propose to bore a Hole through the Body of the Tree; this way carries some probability with it, because hollow Trees, or such as are hurt or decayed in the Body or Stem, are more apt to bear than sound ones. The same reason may be for the cleaving of the Roots of Trees, and for the putting of Stones or Wedges in them; for Trees blown aside by the Wind, or by some other Accident, do usually bear great Quantities, and sometimes more than when they stood firm and upright:



upright: The reason of which may be the Check that is thereby given to the Sap running into the Branches, when less Sap might do to produce Fruit; but the best way is to prune off some of the Branches in Summer-time, when the Sap is in them, which is the best way to abate their Luxuriancy; but this must be done with Judgment, the best time of doing which is in *June*.

*Seventhly*, It is good to have variety of Fruit in an Orchard, because some Apples and Pears that bear in one Year will not do so in another; and therefore where Variety is, you will seldom fail of having some take.

*Eighthly*, Another thing to be considered, is, to plant such Fruit as will hang on the Trees, till ripe, there being many sorts of Fruit that will shake off almost with any Wind; upon which account it is good always to have the South West side of your Orchard well sheltered with high Trees, that Wind being, as I said before, the most troublesome about the latter end of Summer.

I shall here add something concerning the fencing of Trees out of Mr. *Evelyn*, communicated unto him from Dr. *Beal*, which will be of advantage to the planting of Trees in Fields for securing of them from Cattle.

The fencing of single Trees useth to be done by Rails at great Charges, or by Hedges and Bushes, which every other Year must be renewed, and the Materials not to be had in all Places neither; I therefore prefer and commend to you the ensuing form of Planting and Fencing, which is more cheap and easie, and hath other Advantages not commonly known: I never saw it but once, and that imperfectly performed, but have practised it my self with success. Take it thus:

Set your Tree on the green Swath, or rather five or six Inches under it, if the Soil be very healthy; if moist or weeping half a Foot above it: Then cut a Trench round that Tree two Foot, or more, in the



clear from it. Lay a rank of the Tufts, with the Grass outward, upon the inner side of the Trench toward your Plant, and then a second rank upon your former, and so a third and fourth, all orderly placed (as in a Fortification) and leaning towards the Tree after the form of a Pyramid or larger Hop-hill: Always as you place a row of Tufts in compass, you must fill up the inner part of the Circle with the loose Earth of the second Spit, which you dig out of your Trench, and which is to be two Foot and half wide, or more, as you design to mount the Hillock; which by this means you will have raised about your Plant near three Foot in heighth. At the Point it needs not be above two Foot or eighteen Inches diameter, where you may leave the Earth in form of a Dish, to convey the Rain towards the Body of the Tree, and upon the top of this Hillock prick up five or six small Briars or Thorns, binding them lightly to the Body of the Plant, and so you have finished the Work.

The Conveniencies of this kind of Planting, are,  
*First*, That neither Swine, nor Sheep, nor any other sort of Cattle can annoy your Trees.

*Secondly*, You may adventure to set the smaller Plants, being thus raised and secured from the reach of Cattle.

*Thirdly*, Your Trees are fastened in the Hillock against the violence of Winds, without Stakes to fret and canker them.

*Fourthly*, If the Soil be wet, it is hereby made healthy.

*Fifthly*, If very dry, the Hillock defends them from the outward Heat.

*Sixthly*, It prevents the Couch-grass, which for the first Year insensibly robs most Plants in sandy Grounds apt to Graze. And,

*Lastly*, The grazing Bank will recompense the niggardly Farmer for the waste of his Ditch, which otherwise he will sorely bethink.



In the second or third Year (by what time your Roots spread) the Trench, if the Ground be moist or Season wet, will be near fill'd up again by the treading of Cattle; for it needs not be cleansed; but then you must renew your Thorns: Yet if the Planter be curious, I should advise a casting of some small quantity of rich Mould into the bottom of the Trench the second Year, which may improve the Growth, and invite the Roots to spread.

In this manner of Planting, where the Soil is not rich, the exact Planter should add a little quantity to each Root of Earth from a frequented High-way, or Yard where Cattle are kept. One Load will suffice for six or seven Trees, this being much more proper than rotten Soil or loose Earth, the fat Mould best agreeing with the Apple-Tree.

The broader and deeper your Ditch is, the higher will be your Bank, and the securer your Fence; but then you must add some good Earth in the second Year, as before.

I must subjoin, that only Trees of an upright growth be thus planted in open Grounds, because spreading Trees will be still within reach of Cattle as they increase. Nor have I met with any Inconvenience in this kind of Transplanting (which is applicable to all sorts of Trees) but that the Mole and the Ant may find ready Entertainment the first Year, and sometimes impair a weak rooted Plant, otherwise it rarely miscarries. In sum,

This manner of Fencing is soon executed by an indifferent Workman, who will easily set and guard six Trees in a Winter's Day.

I shall conclude this Point with giving a short account of some of the best or most common sorts of Apples, Pears and other Fruits that I have met with, with some Remarks upon the several sorts, in order to procure a more exact account of them, which is a Work that will need more assistance exactly to perform than I am able to procure at present, every  
Country,



Country, and many parts of each Country, having some sort of Fruit or other not known in the next; and therefore in the mean time the Rule that I shall advise most to observe is, to take an account of the best Bearers, and most useful sorts of Fruits, and the particular Soils that they thrive and bear best in.

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Chap. IX. *Some farther Observations concerning the Unfruitfulness of Trees.*

GOOD Dunging, Chalking, or Liming of Orchards, are very beneficial to Trees, which when large draw a great deal of the Heart of the Ground, and cannot maintain themselves with vigour without it.

Sir *Hugh Plat* says, That if you mix green Cow-dung and Urine together, and wash your Trees with it, with a Brush, once in two or three Months, it will keep *Conies*, *Hares*, &c. from barking of them; and he says likewise, that it will destroy the Canker.

A Gentleman near *Hereford* assures me, that he fed several Hogs about some old Apple-trees that he thought had done bearing, and that the next Year he had thirty Bushels of Apples, apiece, off of several of them; and therefore he was proposing to me to have a moveable Sty, and about it to make a Yard with Hurdles, to remove from one Tree to another; which I cannot but think a very good way, and what will be a very great Improvement of all sorts of Fruit-Trees, not only to promote their bearing, but likewise to cure the Moss, Canker, and other Infirmities of them, especially since this way will save the Urine, which I prefer for Trees much before Dung, because it penetrates better to the Roots, and is much to be preferr'd for the curing of any of the afore-mentioned Infirmities; which I am confirmed in by a Letter I receiv'd from———concerning the preserving of Fruit-trees in *Kent*, which I shall give in his own words.

“ It was formerly (as all Ancient Graziers know )  
 “ a Custom to keep up and fatten their Oxen in Stalls,  
 “ in



“ in which Earthen-veffels were placed under the  
“ Planks to fave the Urine that came from them:  
“ With which Urine fo faved, they washed two or  
“ three times in the Month of *March*, their mossy,  
“ cankered, worm-eaten and unfound Trees, and  
“ poured fome of it to the Roots; and if plenty of  
“ it were now to be had, I do not doubt but that  
“ Pippin-Trees might be raifed, made thrive, and  
“ flourish, as well as heretofore.

“ Happening lately to mention this to a Carpenter,  
“ he faid he had feveral times feen at the pulling up of  
“ fuch old Stalls, fome that have had a well fteen'd  
“ Channel under the Planks, leading to a large fteined  
“ Receptacle without the Stall, at which he had of-  
“ ten wondred, but could never think the reason of  
“ it till I mentioned the aforefaid————

This useful Obfervation I had from————near  
*Tunbridge*, in which part of the Country Apple-trees  
formerly flourifhed in fuch abundance, that *Pembury*  
aliàs *Pippenbury*, a Parifh not far diftant, is faid to  
have its Name from the plenty of that Fruit once  
growing there.

That Urine is a very beneficial Manure, is confirm-  
ed by Sir *Hugh Plat*, Dr. *Plot*, and others, and may  
as well be applied to the Body and Branches of the  
Tree to cure Cankers, kill Mofs and Worms, as at the  
Root (that is, in moderate quantities) to warm, invi-  
gorate, and quicken the Circulation of the Sap, efpe-  
cially in a cold barren Soil.

Nor may it be improper here to obferve, that ge-  
nerally fpeaking, all Manures differ in goodnefs and  
frength, according to the different kinds or claffes of  
Bodies they are made of; as that vegetable Subftances,  
*viz. Rotten-ftraw, Beans, Grafs, &c.* are better (quan-  
tity for quantity) than *Marle, Lime, Mud, Sea Sand,*  
&c. and that Animal Subftances, as *Urine, Dung of*  
*Men, Beafts, and Fowls, Bones, and Horns of Beafts*  
burnt or putrefied, *Woollen-Rags*, and the like, are of  
greater ftrength and nourifhment than either.

I fhall



I shall be glad if this Account may put any upon the Trial of raising that excellent Fruit the *Kentish Pippen*, which else, I fear, will be lost: For I find in several Orchards both in *Kent*, *Essex*, and *Hertfordshire*, old Trees of that sort, but I can find no young ones to prosper. A Friend of mine tried a great many Experiments in *Hertfordshire*, about raising of them, and could never get them to thrive, tho' he had old Trees in the same Orchard that grew and bore very well. I likewise tried several Experiments my self, and have had young Trees thrive so well, as to make many Shoots of a Yard-long in a Year, but these young Shoots were always blasted the next Year, or cankered; which makes me think that the Ancients had some particular way of raising of them, that we have lost the Knowledge of, so that what is proposed seems very probable to be the way they did make use of: Which the Circumstances of the place not only confirms, but the Usefulness of the Matter proposed, there being nothing of greater Advantage, as I have found by Experience, than Urine, for the Improvement of all sorts of Vegetables.

And therefore I am sorry to find the ancient Husbandry out-do the present; and that so useful a Material as *Urine* should be so much neglected, and generally let run away to waste, of which so great Advantage is made in *Flanders*, and other parts beyond Sea: concerning which I have in several places given an Account of its Advantages.

*Blood*, *Soot*, and the *Dirt* of *Sinks* is good to lay to the *Roots* of *Trees*, *Vines*, &c. to make them bear.

If your *Orchard* be on dry Ground, to make your Trees bear about the beginning of *May*, when the Trees are in the height of their Blossom, dig a little about them; especially if you mix Sheeps-dung with it, bestow a Pail-full of Water on every Tree once a Day, till you see the Fruit set. I know one that did so, and seldom failed of a Crop.

When



When *Fruit-Trees* are old and decaying, lop off several of the Boughs, and lay *Lime* or *Chalk* to them, and it will cause them to strike new Roots, and to thrive, and bear well; it being a renewal of their Age. Mr. *Moor* in his Description of *Northamptonshire*, p. 487. says, an old Orchard of Apple-Trees, growing mossy and bearing but indifferently, the owner, the beginning of *April*, disbarked the Trees from near the bottom, almost up to the part of the Tree, where the head divides into Branches; and the Bark grew again in Summer: and by the latter end of the Year, was firm and smooth; and had a fine thin Rind, and bear every Year after very well, not one of them missing. And one in *Essex* told me of a Pear-Tree which he barked, about six Inches round; and it occasion'd it to bear every Year tho' it never bore before. In manuring of Trees, do not lay it too near the Body, but at some distance, that it may soak down to the smaller Roots to nourish them, they being as it were the Mouths that suck in the Nourishment for the Trees.

If you have *Vines* or *Fruit-Trees* that run upon the Tyles of any Building, or upon a sloaping Wall, according to Mr. *Fatio's* Proposal, you may set *Melon Glasses* on the Fruit, which will much forward its ripening.

But from what I have already mentioned concerning an Experiment made by a Friend of mine, p. 275. concerning *Walls*, I cannot but prefer Mr. *Langford's* Contrivance of building of them in the Form of a Semi-circle, which he proposes to be about eight Yards in circumference on the inside, and about six in diameter, which he says is found by experience to do well; of which opinion, I must own my self, especially for *Vines*; because they bear only on the Shoots of the same Year; which Shoots are apt to grow upright, and must occasion them to be at a greater distance from the Wall, if they grow upon a sloaping Wall, than where they run parallel to an upright one; and besides, these circular Walls may be conveniently covered, which will be not only a great Advantage to Vines, in that



you may securely let the Grapes hang on the Vines to ripen, as long as you please, without any danger from the Frosts; but you may also by the same means, in the Spring, cover your forward Fruit from being prejudiced by the early Frosts, which should upon other Walls have Matts or Canvass hung before them, from the time of their first beginning to blossom, until they are well knit or set, and for some time after, if you find occasion.

In ordering of *Wall-Trees*, you may prevent unnecessary Branches, by rubbing or cutting off such Buds as come forth, where there is not convenient room for them to be laid.

A Gentleman of *Hampshire* sends me Word, that he has observed but few good Apples to do well in divers Parts of that Country, except the *Golden-Rennet* and *Codlin*, especially on a gravel or sandy Soil that has Springs within three or four Foot of the Surface, and that Oaks on such Land thrive very well.

To which I must add, that I have observed the *Golden-Rennet*, in other places, to thrive on Gravel or Sandy Land, the best of any Fruit-Trees, except *Plumbs*; and in *Hampshire* I have met with greater variety of Apples of the *Golden-Rennet* kind, than in any other part of *England*; and I have observed, that most of the largest sorts of Apples do best on Gravel, and are the least subject to Moss or Canker.

The *Red streak* is reckoned where it yields the best Cyder, not to grow so large as other *Fruit-Trees*, and therefore it may be planted nearer than other Trees.

## Chap. X. *A Catalogue of Fruits, &c.*

THE Aromatick or Golden-Russeting hath no compare, it being of a Gold-colour'd Coat under a Russet Hair, hath some Warts on it, its Flesh of a yellow Colour, its form of a flattish round. This Fruit is not ripe till after *Michaelmas*, but keeps over  
the



the Winter, and is, without dispute, the most pleasant tasted Apple that grows, having a most delicate Aromatick Relish, and melting in the Mouth.

The Orange Apple, so call'd from its likeness in colour and form to an Orange, deserves the next place, having a fine rough Gold-colour'd Coat, resembling the Golden Pippin, only fairer, keeps long, and is of a very pleasant taste.

The Golden Pippin is smaller than the Orange-Apple, else much like it in colour, taste and long keeping, being the best of Apples for Cyder, Eating and Baking.

The Russet Pearmain is a very pleasant Fruit continuing long on the Tree, and in the Conservatory, partakes both of the Russeting and Pearmain in colour and taste, the one side being generally Russet, and the other streak'd like a Pearmain.

The Pearmain, whereof there are several sorts, is so excellent an Apple and so well known, that no more need be said of it; only the larger sort keeps not so well, neither is the Summer Pearmain so good as the Winter; they are all good Cyder-Apples, but no great Bearers.

Pippins are of several sorts, and take their Name from the small Spots or Pips that usually appear on the sides of them. Some are call'd Stone Pippins from their obdurateness; some are call'd *Kentish* Pippins, because they are a Fruit that agrees well with that Soil; others are call'd *French* Pippins, having their original from *France*, which is the best bearer of any of these sorts of Pippins; the *Holland* Pippin from the same cause, and the Russet Pippin from its Russet hue, with divers others denominated from the several places of their Growth; but such as are distinguish'd by the Names of Grey and White Pippins, are of equal goodness. They are generally a very pleasant Fruit, and of a good Juice, fit for the Table, Conservatory or Kitchen, but they are slender Bearers.



The Golden Rennet is a very pleasant and fair Fruit, of a yellow Flesh, and the best of Bearers for all sorts of Soil, of which there are two sorts, the large sort and the small; the smallest keeps the best, and is the best flavour'd, the other is a mealy Apple if kept after *November*, and neither of them good Cyder-Apples alone; but Mr. *Worlidge* commends them if mix'd with the *Red streak*. They sell well in the Market, and are good eating Apples during the first part of the Winter.

We have in *Essex* an Apple call'd a Snow Apple, which is an extraordinary certain Bearer on the light brick Earths, but a very ordinary Apple of its kind; yet for its constant bearing I cannot but value it, for I had rather have any indifferent Apples, than none at all.

There is also in *Hertfordshire* an Apple much resembling a Gennet-Moil, which they call a *Wiltshire*; it is both a good Bearer and a good Cyder-Apple.

The Leather-coat, or Golding-Russeting, as some call it, is a very good Winter Fruit, lasts long, and is of a good, firm and yellow Flesh; and an extraordinary good Bearer, and not so subject to Mould as many other Fruit-Trees are.

The *Bartlet Queening*, is a very good Cyder Apple, especially if mixed with the *Golden Rennet*, which will not do well for Cyder without it. I likewise met with in my Neighbourhood a *Yellow-Queening*, which is a very juicy Apple, and one of the richest tasted Apples that ever I met with. I call it a *Queening*, because exactly of the same Shape, but for colour is wholly yellow, both inside and out. The *Royal-Apple* is also a good Apple, the *Rose-Apple*, *Cotton-Apple*, the *Sage-Apple*, the *Gaunt-Apple*, *Kentish-Codlin*, *Powel-Apple*, *Violet*.

The Green Russeting is a tough and hard Fruit that lasts long.

The Red Russeting is of a lesser size, long lasting, and are all of them of a pleasant Relish.

The sharp Russeting is an extraordinary Bearer, and a good Cyder and keeping Apple.



The *John* Apple, or *Deux-Ans*, so called from its continuing two Years before it perisheth, is a good relished sharp Apple the Spring following, when most other Fruit is spent; they are fit for the Cyder Plantations, being great Bearers, and though dry Fruit, they yield very good Juice, but must be ground before *January*. There is a Summer *John* Apple, that is very much commended also.

The Marigold Apple, so called from its being marked in even Stripes in the Form of a Marigold; sometimes the Onion Apple, from the reddish brown Colour resembling a well-coloured Onion; sometimes called the Kate Apple, and sometimes *John's* Pearmain, from its likeness to a Pearmain, is a very good Fruit, long lasting, and fit for the Table, Conservatory, Kitchen, or Press, yielding a very good Juice; it bears every other Year, even to Admiration: There is another sort of them called Summer Marigolds.

The Harvey Apple, and the round Russet Harvey, are very pleasant Fruit, and good Cyder Apples, but are no good bearers.

The Queen Apple; those that are of the Summer kind, are good Cyder Apples mixed with others, being of themselves sweet: The Winter Queening is good for the Table.

The Paradise Apple is a curious Fruit produced by grafting a Pearmain on a Quince.

The Pome-Roy is a Fruit of good taste, a pulpy Substance, but not yielding much Juice.

The Pome-water is an indifferent good lasting Fruit.

The Golden Douset, or Golden Ducket, is much commended.

The *Westbury* Apple, taking its Name from *Westbury* in *Hampshire*, from whence they are much dispersed into the adjacent Parts, is, as Mr. *Worlidge* says, one of the most solid Apples that grows, of a rough Rind, and obdurate Flesh, sharp and quick taste, lasts long, and yields a very excellent and plentiful Juice, making Cyder equal to the best of Fruits; and for the Kitchen, few or none exceed it.



The Gilliflower Apple is of a pleasant relish and long lasting, of a thick Rind, hard Core, striped, and a good Cyder Apple, making an excellent mixture.

The *Margaret* Apple is the best and most early, usually ripe about *St. Margaret's Day* in *June*; it is a fair and beautiful Fruit, of a pleasant taste and scent, and deserves a more general Propagation.

The Jenneting is next to be esteemed, as well for its early ripening as its pleasant taste.

The *Devonshire* Quarrington is also a very fine early Apple.

The Summer Pippin is a very pleasant Apple in colour and taste, yielding a delicate Juice.

The Creeper is an Apple so called from the Tree, which grows low, and traileth its Branches near the Ground.

The Ladies Apple is very beautiful, and begins to be good about *December*, and lasts 'till *March* and *April*; it is a great bearer, and never wrinkles with keeping.

The Ladies Thigh is a kind of Russeting in shape and colour, with a very juicy and tender Pulp, a little musked; its Tree is very long before it bears, but afterwards produces abundance, and is ripe the beginning of *July*.

The Violet Apple is of a whitish ground Colour, a little speckled in those parts that are from the Sun, but striped with a deep Red on the Sunny-side; the Pulp is very fine and delicate, and is to be eaten as soon as gathered, tho' it will continue good 'till *Christmas*.

The Codling, so called from the use it is put unto, makes a good Summer Cyder, and is a good bearer, either in Hedges or Standards.

The Claret-Wine Apple is fair, and yields plenty of a pleasant sharp Juice, from whence it takes its Name; being well ordered, it excels most other Cyders, especially with a mixture of sweet Apples.

The White-Wining is a small white Apple, and a good bearer, the Fruit juicy and pleasant, but soon perishing, and the Cyder made thereof small.



The King Apple, tho' not common, yet is by some esteemed an excellent Apple, and preferred before the Jenneting.

The Famagusta is also in the number of the best of early Apples.

The Giant Apple is a large Fruit, well tasted, and the best of any Summer Apple for the Kitchen.

The *Bontra-due*, or Good Housewife, is the largest of Apples, a great bearer, good for the Kitchen. It makes good Summer Cyder.

The Cat's-head, by some called the Go-no-further, is a very large Apple, and a good bearer.

The Spicing Apple, of all Apples that are marked Red, is the meanest.

The Gennet Moil is a pleasant and necessary Fruit in the Kitchen, and one of the best Cyder Apples, and a good bearer.

The White Must is a very pleasant Apple, yielding great plenty of Vinous Liquor, bearing this Name in *Herefordshire*, and is thought by some to be the same with the Golden Rennet in *Hampshire*.

The Fox Whelp is esteemed among the choice Cyder Fruits.

The Bromsbury Crab, altho' little better than the common, yet kept on heaps 'till *Christmas*, yields a brisk excellent Cyder, and very strong.

Eleots are Apples much in request in the Cyder Countries for their excellent Liquor, but not known by that Name in several Parts of *England*.

The Stocken, or Stoken Apple, is likewise in esteem there, altho' not known by that Name in many Places.

The Bitter Scale is an Apple much esteemed of in *Devonshire* for the excellent Cyder it yields, without the mixture or assistance of any other.

The Dean's Apple is there well esteemed of for the same reason.

As also is the Pleasantine, perhaps the same with our Marigold.



The Pureling. Its Name is not usual, but in the same Parts.

The Underleaf, whose Cyder is best at two Years; 'tis a very plentiful bearer, hath a Rhenish Wine flavour, the very best of all Cyders of this kind; the Apples should be hoarded a little within Doors; and the longer you would keep your Cyder, the longer you must hoard your Fruit.

A long pale Apple called the Coleing, about *Ludlow*, is an extraordinary bearer.

The Arier Apple, a constant bearer, making a strong and lasting Cyder; some call them *Richards*, some Grange Apples; and indeed they make so excellent a Drink that they are worthy to be recovered into use.

The Olive, well known about *Ludlow*, may, I conceive, be accounted among the Winter Cyder Apples, of which it is the constant Report, says Mr. *Evelyn*, that a Hogsheaf of the Fruit will yield an Hogsheaf of Cyder.

Fillets, whereof also there are the Summer and the Winter, in very high esteem for the delicate Vinous Liquor they yield. The Summer Fillet for the present, and the Winter Fillet for lasting Cyder.

The Red-streak, of all Cyder Fruit, hath obtained the Preference, being but a kind of Wilding, and tho' kept long, yet is never pleasing to the Palate; there are several sorts of them, the Summer and the Winter, the Yellow and the Red, and the more green Red-streak: Some sorts of them have red Veins running thro' the whole Body of the Fruit, which is esteemed to give the Cyder made thereof the richest Tincture if they are kept 'till mellow; the Cyder at first is very luscious, but if ground more early, it is more racy.

The Quince Apple, so called from its Colour, is a good Table Fruit as well as Cyder Apple.

The Nonsuch is a long lasting Fruit.

The Angel's Bit is a delicate Apple for taste, and the Tree, or its Name, proper to *Worcestershire*, and those Parts.



The Peeling is a lasting Apple, makes very good Cyder, agrees well with this Air, and is a good bearer.

The Oaken-pin, so called from its hardness, is a lasting Fruit, yields excellent Liquor, and is near the nature of the *Westbury* Apple, tho' not in Form.

The Greening is of a colour green, and keeps to a second Year, and is a good Apple.

The Lording is a fair, green, and sharp Apple, a constant bearer, being a hardy Fruit, for the Kitchen only.

Sweet Apples there are of several sorts, and their Names change in every Place, so that they are rather known by their Colour and Size than their Names; there is one called the Honey-comb in some Places, which is a fair Apple, and mixed with other Fruit makes admirable Cyder; so doth the small Russet sweet Apple, whose Tree is always Cankery.

Pome-appase is an Apple newly propagated, the Fruit is small and pleasant, and yields no unpleasant Scent; the Tree is a good bearer, and it is supposed that this is that which is called the Lady's Longing.

The Fig-apple is also newly propagated, the Tree yielding no Blossoms as is usual with other Apple-Trees, nor hath the Fruit in it any Core or Kernel, in these resembling a Fig, and differing from other Apples, yet is a good Table-Fruit, and lasting.

The *Sodom* Apple, or Bloody Pippen, is a Fruit of more than ordinary dark Colour, and is esteemed a good Apple.

The *Muscovy* Apple is a good Winter-Fruit, and a great Curiosity, for that it is transparent.

Belle and Bon are of two sorts, the Summer and Winter; it is a fair Apple, and a good bearer, but the Fruit not long lasting; it makes indifferent Cyder; the Winter Belle Bon is much to be preferred to the Summer in every respect.

The Pear Apple is a curious pleasant Apple of a rough Coat, but is no good bearer.

There are also the Apples called Esquire *Vernon's* Apple, the Grutchling, the Pear Russet, the *Stoak* Ap-



ple, the *Suffolk* Apple, which are much commended for the Table and Kitchen, *Golden Douset*, *White Fillett*, *London* Apple, *Royal* Apple, the great Apple, the *Powell* Apple, &c.

The *Pell-mell* Apple, the *Thrift* Apple, and the *Winter Glory*, are very good lasting Apples.

Crabs, when kept 'till they are mellow, may be reckoned amongst Apples, and being ground with other mellow Fruit, do much enrich the Cyder, and is the best refiner of foul Cyder.

The *Castard Parsley* Apple, the *William*, the *Cardinal*, the *Short-start*, the *Winter Red*, the *Chestnut* Apple, and the *Great Belly*, are in many Places Apples of esteem, but being not acquainted with them I can only name them. Many more there are both *French* and *English*, which either are not made familiar to us, or else are peculiar only to some Places, or their Names changed in most Counties, or else are of small account, which to enumerate would be tedious and useless.

### Chap. XI. Of Pears.

THE next in esteem are Pears, so called from their *Pyramidical* Form, whereof there are so great variety, that the Kitchen and Table may be furnished throughout the Year with different Species.

The early *Susan* is the first ripe, being a small round Pear, little bigger than a large Cherry; the Colour is green, and the Taste pleasant.

The *Margaret*, the *Maudlin*, the *Cluster* Pear, the *Lenthal Primet*, the *Sugar*, the *Madera*, the *Green Royal*, *July* Pear, *St. Laurence*, *Green Chesil*, and many other early Pears are in esteem for the Tables in *July*; but after them you have

The *Windsor*, the *Green-field*, the *Summer Burgamot*, the *Orange*, the *Sovereign*, several sorts of *Katharines*, whereof the *Red Katharine* is the best, the *Denny* Pear, *Prussia* Pear, *Summer Popperin*, *Lording* Pear, *Summer Bon Chrestien*, the *Orange Burgamot*,  
*Hampden's*



*Hampden's* Burgamot, *Bezy de Hery*; the Violet Pear, the Painted Pear, so called from its delicate striped Colours; the Rosewater Pear, the Shortneck, so called from the shortness of its Form and Tail; the Binfield or Dove Pear, the great Muck Pear, the great Russet of *Remes*, *Amadotte*; the *Roufelet Norwich* Pear, the Pomegranate Pear, so called from its shape, and the *Edward* Pear very pleasant; the *Meola ala Busk*, Crown Pear, *St. Michael's* Pear, *Carlisle* Pear, *Roshea*, esteemed an extraordinary Pear, *King Katharine*, *Roufelet Petit*, *Roufelet Halstife*, Musk Blanquet, Dove, Musk Burgamot, Queen Pear, *White Robert*, and the desirable Pear, are all very good Table Fruit for their Season before or at *Michaelmas*.

The *Bævre du Roy* is esteemed for the Table the best of all Summer Pears; 'tis a fair brown Pear and excellent in its Season, melting in the Mouth, and thence called the Butter Pear, and bears well against a Wall. The green *Bævre* Pear is more green and larger than the former.

The *Lewis* Pear, or by some the Maiden-heart, is a very good bearer, and the best of all Pears to dry.

The Bloody Pear is a good Pear, taking its Name from the Red Juice it hath within its Skin, and is a very great Curiosity.

The *English* Warden, the *French* Warden, and the great *Spanish* Warden, the White Warden, the Stone Pear, the *Arundel* Pear, the Bishop's Pear, the Caw Pear, Winter Musk Cashurine, the Lady *Hatton's* Pear, the Quince Pear, the Davis Pear, Malborne Pear, the Red *Roman* Warden, the Green Warden and Winter *Norwich* are excellent baking Pears.

The great black Pear of *Worcester* or *Perkinson's* Warden bears well against a Wall, they usually weighing twenty Ounces, or more, and being twice baked with Sugar exceed most Fruits.

The *Diego* Pear, *Monfieur John*, the *Gilliflower* Pear, Pear Royal, Bowden Musk, *French* Violet Mogul Pear, *Virgo*, *Lair*, *Sovereign* Pear, *Oxenbury* Pear, the white



*Worcester* Roufelet-durine, *Montpelier* Imperial Pear, Pear *de Lyons*, a rare Winter Pear for the Table; the Burgamot Bougee, Rowling Pear, Balsam Pear, Bluster Pear, Emperor's Pear, Queen-hedge Pear, Frith Pear, Brunswick Pear, *Bing's* Pear, Winter Poppering, Thorn Pear; the Portail, the Nonfuch Dioniere, Winter *Katharine*, Clove Pear, Lambert Pear, Ruffet Pear, Saffron Pear, the *Petworth* Pear, or Winter *Windsor*, Winter Burgamot, Pound Pear, and Hundred Pound Pear, Long Burgamot, Burncat, Lady Pear, Ice Pear, Dead-man's Pear, Bell Pear, the Squab Pear, Spindle Pear, Dogoniere, Virgin, Gascoign Burgamot, Scarlet Pear, and Stopple Pear, all are very good Winter Pears, and keep throughout the old Year.

Pears that usually keep until the succeeding Spring are the *Bon Chrestien*, the best of Winter Pears; the great Surrein, or Serene, Little Dagobert, the Double Blossom Pear, the longest liver of all, and takes very well in the Spring; the Oak Pear, the great Kairville, the little Black Pear of *Worcester*.

Pears that are esteemed for their Vinous Juice in making of Perry in *Worcestershire*, and those adjacent Parts, are the Red and Green Squash Pears, the *John* Pear, the green Harpary, the Drake Pear, the *Mary* Pear, the Lullam Pear; but above the rest are esteemed the Bosbury, and the Bareland Pears, the White and Red Horse Pears, and above all, that which is most commended is the *Turgovian* Pear mentioned by Mr. Evelyn.

When I lived in *Hertfordshire*, a poor Man brought me three or four Bushels of small Pears, which were very small, hardly so big as the smallest Crabs, having something of a muskish Flavour, though with it so rough a taste that the Hogs would hardly eat them; which made me think them a good Perry Pear, and accordingly I made Perry of them, which was so rough the first Year that no Body would drink it: But I found that as the roughness wore off, the fine Flavour increased, so that at four Years of Age it had the colour



lour of Canary and was as strong, and had as fine a Flavour, being valued by all that tasted it; but the Man that brought them me dying before I knew the excellency of my Liquor, I could not be so certain of the Pear, as I might if I had had his Directions, there being three or four Trees cut down in the Field where he gathered them. Since, I got some Grafts of a Pear just like it for shape and taste, which I believe to be the same; but having removed the Grafts to Stocks planted on a different Soil, I find the rough taste near off, that 'tis now become a pleasant tasted Perry, and so I believe will not make so good Perry as it did; but planting of them in the Fields, my Neighbours will not let me have a quantity to try the Perry of them.

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Chap. XII. *Of Cherries.*

**I**N the next place the Cherry is admitted to be a Fruit of general Use, especially for the Palate, and for the Conservatory. They are ripe on the Trees but three Summer Months, *May, June, July*, afterwards to be had only in the Conservatory.

In *May* the Cherries then ripe are usually so called from the Name of the Month, the Duke and Archduke, against a good Wall, are most Years ripe before the end of this Month.

In *June* are ripe the White, Red, Black, and Bleeding Hearts, Lukeward, one of the best of Cherries, the Early *Flanders*, the Cluster Cherry, bearing three, four, or five usually on a Stalk, the White *Spanish* Cherry, the Amber Cherry, the Black *Orleans*, the White *Orleans*, Nonsuch, the *Spanish* Black and the *Naples*.

In *July* usually succeed the late *Flanders*, commonly called *English* Cherries, Carnations, a delicate Fruit for the Table or Conservatory; Morella, or the Great Bearer, being a black Cherry fit for the Conservatory before it be through ripe, but 'tis bitter eaten raw,  
only



only it is to be esteemed being the last Cherry that hangs on the Tree, the *Morocco* Cherry, great Amber, the Egriot, Biggarreaux, the Prince Royal, the *Portual* Cherry, the King's Cherry, the Crown Cherry and the Biquar, both ill Bearers, the Great Purple Cherry one of the best and latest Cherries, and a good Bearer, the Ounce Cherry, so called from its fairness, the Dwarf Cherry, so called from the smallness of its Twigs and Fruit; there is also the common Black Cherry much in esteem for its Physical Properties.

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### Chap. XIII. *Of Plumbs.*

**T**HERE are great variety of Plumbs, and they are also appropriated to several Uses; they continue longer on the Trees than Cherries, and are by some esteemed a more pleasing, but not so wholesome a Fruit.

The first ripe are the Red, Blue, and Amber Primordian Plumb, the Violet, Red, Blue, and Amber, the Matchless, the black Damascen, the *Morocco*, the *Barbary*, the *Myrobalan*, the Apricock Plumb, a delicate Plumb that parts clean from the Stone, the Cinnamon Plumb, the King's Plumb, the *Spanish*, the Lady *Elizabeth's* Plumb, the great Mogul, and the Tawny Plumb.

After them are the White, Red, and Black Pear Plumbs, the two former little worth, but the Black a pleasant Fruit, the Green Osterly Plumb, the Muffel Plumb, one of the best of Plumbs, the *Catalonia* Plumb, much like the former, the White Prunella, the Black Prunella, the Bonum Magnum a fair yellowish green Plumb, excellent for the Kitchen and Conservatory, the Wheaten Plumb, the *Laurence* Plumb an ill tasted Fruit, the Bole Plumb, the Cheston Plumb, the Queen Mother Plumb, one of the best sort, the Diapered Plumb, the Marbled Plumb, and the Blue Marbled, the Damasco Plumb, the *Foderingham* Plumb, the Blue and Green Podrigon, and the White, not so good a Fruit, the Verdoch good only to preserve, the Peach Plumb, the Imperial Plumb one of the largest of Plumbs,



Plumbs, the Giant Plumb, the Denny Plumb, the *Turkey* Plumb, the Red, White, and Green Peascod Plumbs, the White, Yellow and Red Date Plumbs, the Nutmeg Plumb, the Great *Anthony*, the *June* Plumb, the Prince Plumb, the last ripe and good for several Uses.

There are several other sorts of Plumbs, as the Friars Plumb, Becket Plumb, Chrystian Plumb, White Muffel, White Prunella, *French* White Nutmeg, Catholick Plumb, *Turkey* Plumb, Amber Plumb, and the Grass Plumb, all of them curious and well tasted Fruits.

There are two sorts of *Damascens*, the Black which is the most useful and best of all Plumbs, and the White which is not so good as the Red: These are natural to our *English Soil*, as are the White and Black Bullace, whereof the White are pleasant in *October* and *November*, and the Black necessary for the Kitchen in *December*, they usually hanging on the Trees 'till *Christmas*.

There is also a *Cornelian* Plumb or Cherry, which may be increased by Layers, and will sometime grow of Slips or Branches; also of the Stones only, they will lie sometimes a Year in the Ground before they come up.

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#### Chap. XIV. Of *Apricots*, *Peaches*, *Malacotounes* and *Nectarines*.

THE *Apricots*, so called from *Apricus*, delighting in the Sun, is a kind of Plumb, but far exceeding any of the former in every respect; whereof

The *Algier* Apricot is the earliest ripe; it is a small round and yellow Fruit, ripe in *June*.

The Masculine Apricot is a better and earlier Fruit than the former, but not so good a Bearer.

The long White and Orange Apricot differ from the common Apricot, as their Names tell you; there is also the *Turkey* Apricot.

The Green *Roman* Apricot is the largest of all the kinds, and therefore best for the Kitchen and Conservatory.



Gum is hurtful to Apricots and Peaches, and should be taken off to the Quick, and some Cow-dung clapped on the Wound, wrapping of it round with some Linen, which tie on with Pack-thread.

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### Chap. XV. Of Peaches.

**P**EACHES, from the *French* Name *Pesche*, are of longer continuance than Apricots, and of a more rich, noble Gust and Flavour.

The most early are the Nutmeg, both White and Red, the *Troy* Peach, next the *Savoy* Peach, *Isabella*, *Persian*, the *White* Monsieur, *Newington* Bellice Peach to be preferred to the former, the *Queen* Peach, the *Magdalen* Peach, and the *Double Blossom* Peach.

After these come the *Rambouillet*, the *Musk* Peach, and the *Violet Musk*, both usually esteemed the best of Peaches, the *Crown* Peach, the *Roman* Peach, *Man* Peach, *Quince* Peach, *Grand Carnation*, *Portugal* Peach, *Bourdeaux* Peach, late *Newington* Des Pot being spotted, *Verona*, *Smyrna*, *Pavia* Peach, and the *Coleraine* Peach; one of the latest is the *Bloody* Monsieur, an excellent Peach, very Red within and without.

The *Modena*, *Orleans*, *Red* Peach, *Morello* Peach, *Navarra* and *Alberges* are very good Fruit, and come clean from the Stone.

There are several other sorts of Peaches, as the *Arundel*, the *Admirable*, the *Sion* Peach, the *Uvedale* Peach, the *Superintendent*, the *Eaton* Peach, the *Laurence* Peach, the *Mountaban*, the *Persick*, the *Minion*, the *Perprice*, the *Supreme* Peach, and the *Arabian* Peach, all of them very curious Fruit. But the *Ricket* Peach hath lately gained the Reputation of being the best of Peaches.

Of *Malacotounes*, as much as to say, Apples with Cotton on them; there are two or three sorts, but being late ripe, and old Fruit, they are not much valued.

Nectarines,



Nectarines, of the favour and taste of Nectar, are very pleasant Fruit, whereof the *Red Roman* is the fairest, and by most esteemed the best and most delicate Fruit for its Gust, that this Island yields: By some the *Muroy* is preferred, by others the *Tawny*, neither of them so large as the *Red Roman*.

The *Red* or *Scarlet* Nectarine is by many much esteemed, because it leaves the Stone.

Besides all which, there are the *Great Green*, the *Little Green*, the *Cluster*, the *Yellow*, the *White*, the *Paper White*, the *Painted*, the *Russet*, the *Genoa*, the *Ægol*, the *Persian*, and the *Orbine* Nectarines that are very good Fruit.

Peaches thrive and bear best in a moist Soil, and therefore they should be well watered if planted on dry Land. Stones of Peaches will produce Trees, that will bear Peaches sometimes better than the Peaches out of which the Stones were taken, by which means the Gardiners by setting many Stones have raised new Sets, but this cannot be so well practised by private Persons, because Peach Trees so raised, will be longer before they bear than those which are inoculated; and because, tho' some prove better, yet many prove worse, and so there is a hazard run in not filling of the Walls with good Fruit.

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#### Chap. XVI. *Of Quinces.*

THE *Portugal* Apple Quince is esteemed the best; it is a large yellow Fruit, tender, pleasant, and soon boiled.

The *Portugal* Pear Quince is much like the former, except in its form.

The *Barbary* Quince is lesser than the other, as is the *English* Quince, which is a harsh Fruit, and covered with a Down or Cotton.

The *Lyon's* Quince is a large Yellow, and the *Brunswick* Quince a large White, both very good; but all inferior to the two first sorts.



Chap. XVII. *Of Figs.*

**F**IGS are highly esteemed by some, whereof the Great Blue Fig is most accounted of; next unto it the Dwarf Blue Fig, being much less in Tree and Fruit, but better tasted and sooner ripe.

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Chap. XVIII. *Of the Cornel Tree.*

**T**HE Cornel Tree beareth the Fruit commonly called the Cornelian Cherry, as well from the Name of the Tree as the Cornelian Stone, the Colour whereof it somewhat represents. This Fruit is good in the Kitchen and Conservatory.

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Chap. XIX. *Of the Pruning of Fruit Trees.*

**I**T conduceth very much to the Proof and Growth of a Tree to be well pruned from its unnecessary and injurious Branches, and also to the making of it Fruitful.

If a Tree is to be transplanted, and you are obliged to lessen the Roots by taking of it up, you must take care to lessen the Head, that there may be a proportion between the one and the other; because the Head depends upon the Roots for its Nourishment.

The best time to prune Trees is in fair Weather, and in the decrease of the Moon.

You must not prune a Graft the first Year, though it shoot never so strong.

But a Peach, the more it runs to Wood, and the stronger Shoot it makes, the better it will bear.

Wall Trees are to be pruned in Summer, and in Winter; the Summer pruning is to be about *June* or *July*, to take off the superfluous Sprigs or Shoots of the same Year's growth from Vines, Apricots, and other Trees that put forth large Shoots that impede the Fruit from its due Maturity, and contract much of the Sap of the Tree to themselves, and thereby rob the other.



In Winter, as soon as the Leaves are off the Trees, you may prune and cut away the residue of the Branches, and place those that are fit to be left in order: This Work may be continued throughout the Winter, except in great Frost; but in *February* or *March* is the best time to prune Trees, only you must observe to prune the most luxuriant and vigorous last, and to cut your Boughs close to the Body, and not leave them any length from the Tree, because by that means they become hollow, and serve only to convey water to the Body to rot it, and do not let your Lop grow large upon your Trees, for it makes the Scars the larger, and causes the Trees to be unthrifty, or die the sooner, where you cut them quite off; only Peaches and Nectarines are not to be cut till they begin to Bud, and observe to cut away superfluous Branches, or such as cross one another, or grow too thick, or that offend any other Tree or Place, or that are broken, bruised or decayed, and all the *August* Shoots, where-ever you find them, unless the place be naked, and that you suspect the next old Branch will not suffice to cover it, and Branches that shade the Fruit too much.

In pruning of Trees, especially Wall Trees, be sure to leave the small Twigs that are short and knotted, and that blossomed the succeeding Year, for you may observe that most Apricots, Peaches, Plumbs, Cherries, &c. grow on these Sprigs, being usually of two Years growth; they are therefore to be carefully nourished, and not cut off, as is usually done to beautify the Tree.

*Apples* and *Pears*, which bear Fruit also on the Branches that are of two Years growth, and 'tis necessary to be often taking off of some of the old Wood of Fruit Trees, that you may have a Succession of Branches to bear; and when your Trees are young, let them not fill the Wall too thick, because it will hinder their bearing, and oblige you to cut them too much when they grow old.

When



When an old Tree puts forth stronger Branches at the Bottom than at the Top, and the Top is unthrifty, cut it off, and bring your Tree into its Form from the lower Branches.

Every Bud which hath but a single Leaf produces only Wood; but that of Fruit hath many Leaves, and the more it hath, the sooner it will bear, and the greater will be its Fruit.

The Fruit Buds which grow on the Body of the Tree, produce fairer Fruit than such as break out of the collateral Twigs and tops of Branches.

Rub off all the Buds which sprout out either before or behind your Wall Trees: And,

If you design to have your Tree soon furnished on both sides, hinder it from shooting in the middle; and note, that the more you prune a Tree, the more it will shoot.

If any Boughs of Fruit Trees bend downwards with the weight of their Fruit, the next Spring cut off some of the superfluous Twigs, and let not Fruit Trees grow high, because it takes too much of the Sap from the Fruit, and makes it troublesome and dangerous to gather; therefore make them spread as much as you can.

In pruning of Fruit Trees, do not thin the Boughs next the Body, except they cross or gaul one another. But thin them most at the outmost Branches, or where the Branches are the thickest, except you meet with a Branch that has a bearing Bud at the end, that be sure to spare.

*Vines, Gooseberries, Currants, &c.* bear Fruit for the most part on the Branches they put forth the same Year; so that in pruning of them, you may cut off much of the Shoots of the foregoing Year, and of the old Wood, and there will be more Sap to put forth fresh ones the next Year, provided you leave plenty of Buds for them to put forth at; and with this Caution, that such as grow luxurious in Wood  
are



are not apt to bear, and the more you cut off, the more they will run to Wood.

*Stone Fruit Trees* generally bear on the Branches of the foregoing Year; therefore in pruning of them leave a sufficient Number of such Branches.

Make as few Wounds in a Tree as you can, and rather extenuate a deformed Branch, than haggle it in several places; on unthrifty Trees cut your Boughs shorter, and leave fewer on them than on thrifty ones.

In Wall Fruit cut off all gross Shoots, how fair soever they seem to the Eye, that will not without much bending comply well with the Wall: For if any Branch happen to be wreathed or bruised in the bending or turning (which you may not easily perceive) tho' it doth grow and prosper for the present, yet it will decay in time, and the Sap or Gum will be spewing out of it, which is the cause of the decay of many a good Tree.

In pruning of Trees or Vines leave some new Branches every Year, and take away (if too many) some of the old, which much helpeth the Tree, and increaseth its Fruit.

When you cut your Vine, leave two knots at the next Interval, for usually the two Buds yield a Bunch of Grapes, the not taking care of which often makes Vines unfruitful.

If you cut off any Boughs or Branches, cut them sloping, so as the Rain and Wet may fall off from them, and near to a Bud, that they may the sooner heal without leaving of any Stubs.

It is good also where your Tree is too full of Fruit to disburthen it of some of them, and the rest of the Fruit will be the fairer.

The great thing to be taken care of in pruning and nailing of Trees, is to spread it like a Fan, that it may handsomely cover the Wall. See pag. 394.



Chap. XX. *Of some other necessary Observations about Fruit-Trees.*

**S**TRONG or hot Dung is not good for Fruit-trees till it is thoroughly rotten and cold, but on rich warm Land, Mud or Soil that lies in Streets or Highways, or any uncultivated Earth where it may be had, is best, especially for Apple-Trees.

Many applying of Soil and Manure to their Trees, commonly lay it near to the Stems, whereas they should lay it at a proportionable distance to the spreading of the Roots, according to the Age and long standing of the Tree.

If you have an Orchard or other Plantation that is old, and you have a mind to extirpate it upon the account of the decay of the Trees, either set out fresh Ground, or dress and dig the holes a Year before you design to plant them, letting of them lie open to take the Air, that the Sun and Frost may refresh the Earth, and do not plant your Trees in the places where your old ones stood, lest the old putrid Roots corrupt and spoil the young ones.

Winter Fruit, where there is Sun enough to ripen them, are more durable and lasting that grow upon stiff Land, and commonly the best flavoured: But Trees that grow upon rich Land are the most thriving, and bear the largest Fruit, tho' not of so good a relish.

However, for them that live in the Northern parts of *England*, I would advise them to plant chiefly Summer-Fruit, because the other seldom ripens kindly: Only this may be considered, that where Plantations are upon a gravelly, sandy, rocky or Lime-stone Soil, there is at least two degrees difference between such a Soil in the North, and a cold Clay in the South. Besides, the declivity of a Hill of a Southern Aspect, being well sheltered, gives a great Advantage to the ripening of Fruit. All which things are necessary for a Planter to consider, that he may accordingly suit his Plantation and Situation to one another.



Where Fruit-Trees are old, it is good to Prune or Lop them well, and to Manure them often with Dung, rich Earth; or, which is best, with Lime or Chalk, where it is to be had. Sir *Hugh Plat* advises the taking of two Quarts of Ox or Horses Blood, and temper it with Pigeons-dung, till it make it into a soft Paste, which he says is a most excellent thing to apply to the Roots of old Trees, the Roots being first opened, and laid bare a few Days; this will recover a Tree or a Vine almost dead, and must be laid to the Tree about the midst of *February*, and to a Vine about the beginning of *March*.

I shall conclude this part of Husbandry relating to Fruit-Trees, with Recommendations of the Vine, the Juice of which being so much desired, and considering the Advantages that it brings to those Climates and Countries that it is natural to; I could not omit it without making some Essay towards the Propagation of so useful and beneficial a Commodity, especially since it is plain that Vineyards have formerly been in *England*, and that they are now in many Places of the same Climate with us, where they thrive to the great Advantage of the Owner; and therefore I cannot but think the want of *English* Wine to proceed only from Negligence, and our easie procuring of it by means of our Navigation, which tho' it may seem to be an increasing of our Trade, yet it was procured upon a very uneven Balance while we had it from *France*. However, let any Commodity be procured upon the best Terms of Trade that can be proposed, it is much short of the Advantage that any thing of a Nation's own Product will amount unto: And therefore I could wish that a greater Diligence were used for the Promotion of it, especially in the South parts of *England*, which I should think the Essay of the Vineyards of that worthy Gentleman Sir *William Basset's*, near the *Bath*, should encourage; since I have drank Wine made of his Grapes (as I have been informed) that I think was as good as any of the Wines that I have drank, either



in *Paris* or *Campaign*. What Art was used to it I could not learn, but it is what I think is worth inquiring after; and tho', I suppose, I may not propose the same Method, yet when I come to treat of *English* Liquors, I hope I shall be able to do somewhat towards the Improvement of it; and therefore I shall at present confine my self only to what relates to the Propagation and Culture of the Vine.

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### Chap. XXI. *Of Vines.*

**T**HE Vines most proper for our *English* Climate I think are, First, The small black Grape, by some called the Currant, or Cluster-Grape, which I reckon the forwardest of the black sort. Secondly, The White Muscadine, the Parsley-Grape, and the Muscadella, which is a White Grape, not so big as the Muscadine, tho' as soon ripe; and the White and Red Frontiniae, if planted in a very warm Place.

The best Soil for Vines, is the hottest Gravel, Sand or rocky Ground, provided they be kept well watered and shaded at first planting; and if the aforementioned Soils run much to Brambles, it is a promising sign of the Vines thriving; but whatever the Soil be, it ought to be fresh, and not to have been plowed up of a long time. The Soil will much forward their ripening, as I observed before.

The next Advantage to be given to Vines in these cold Climates, is that of a warm situation and good shelter, which the Declivity of an Hill lying to the South will best afford, especially if well sheltered from the North, and encompassed with a good Brick-wall, because Hills are not so subject to the Morning Fogs, nor infectious Mists, as low Grounds are: Besides, flat Land does not so soon enjoy the benefit of the rising Sun; nor doth it stay so long upon them in the Evening; for since the Vine doth above all things affect a dry Soil, especially after the Fruit begins to be formed, and approach to its Maturity, there is nothing more



noxious to it than at that Season to be infected with the cold heavy Damps of these Fogs. It is in that as much as in any other thing, wherein our more Southern Climates have the Advantage of us.

Vines may be increased by Layers, which may be laid any time in Winter before *January*, and will often grow of Cuttings only stuck in the Ground in a moist Place, and well watered in Summer, if it prove a dry time, or of Suckers.

For to plant a Vineyard, in *July*, when the Earth is very dry and combustible, plow up the Swarth, and burn or denshire it, as is before directed about plowed Land. In *January* following spread the Ashes.

The Ground being thus prepared, make your Trenches cross the Hill from East to West, because the Vines standing thus in Ranks, the rising and setting of the Sun will by this means pass thro' the Intervals, which it would not do if they were planted in any other Position; nor yet would the Sun be able so well to dart its Beams upon the Plants during the whole course of the Day.

To plant the Setts, strain a Line and dig a Trench about a Foot deep, and set your Plants in it about three Foot distance every way one from another; trim off the superfluous Roots of your Setts, and leave not above three or four Eyes or Buds upon that which is above the Ground, and plant them about half a Foot deep, setting of them sloaping as they commonly set Quick, so as that they may point up the Hill: Which being done, take long Dung, or Straw, and lay on the Trenches of a reasonable thickness to cover the Earth, and to preserve the Roots from the dry piercing Winds which would otherways much prejudice them, and from the burning heat in Summer. Keep them well howed and clean from Weeds, and if need be water them. The best time to plant them is in *January*.

The first pruning of the new set Vine, ought not to be till *January* after its planting, and then you should



cut off all the Shoots as near as you can, sparing only one of the most thriving ones, on which you should leave only two or three Buds, and so let it rest till *May*, the second Year after planting; and then be sure to clear the Roots of all Suckers which do but exhaust and rob your Setts, for the small Branches of Vines produce no Fruit, and leave no Branches but what break out of the Buds you left before, continually taking care to suppress the Weeds. The same Method is to be taken the third Year, by cutting off all the Shoots in *January*, sparing only one or two of the most thriving; which being done, dig all your Vineyard, and lay it very level, taking great care that in this Work you do not cut or wound any of the main Roots with your Spade: As for the younger Roots, it is not so material, for they will grow but the thicker, and this Year you may enjoy some of the Fruit of your Labour, which, if answerable to your Expectation, will put you upon providing of Props for them of about four Foot long, which must be placed on the North-side of your Plant. In *May* rub off such Buds as you think will produce superfluous Branches. When the Grapes are about the bigness of birding Shot, break off the Branches with your Hand at the second Joynt above the Fruit, and tie the rest to the Prop. The best way is to break, and not cut your Vine, because Wounds made with any sharp Instruments are not apt to heal, but cause the Vines to bleed.

*Fourth  
Year.*

The following Year after its bearing you will be likely to have three or four Shoots to every Plant, and therefore in *December* cut off all the Branches except one of the strongest and most thriving, which leave for a Standard about four Foot high, cutting of the rest very close to the Body of the Mother-Plant, which tie to your Prop till it is big enough to make a Standard of it self: And then you must suffer no Shoot to break out but such as sprout at the top about four Foot from the Ground, all which Sprouts the *French* prune off every Year, and trust only to the new Sprouts  
which



which are the only bearing Shoots. But others propose to leave two or three Branches, the one successively after the other, and so they always cut off the oldest every Year, and nurse up the other young ones; but the number of the Branches should be proportionable to the thriftiness of the Vine.

In *August*, when the Fruit begins to ripen, break off such Shoots as you find too thick; but this Work you must do with Discretion, and only so as to let in the Sun for the ripening of the over-shadowed Clusters, but not to leave them too bare, lest you expose them too much to the scorching Heat by Day, and the moist Dews by Night. If you find a Vine to bleed, rub some Ashes upon it; and if that will not do, some commend the searing of it with a hot Iron.

When thro' often stirring of it you find your Vineyard poor (which the weakness of the Crop will soon discover) prune your Vine, as is before directed, and spread good rotten Dung mixed with Lime, over the whole Ground, letting of it lie a whole Winter to wash into the Ground, mixing of about ten Bushels of Lime with a Load of Dung, and if some Ashes or Soot be likewise spread on it, it will do well, which Manure turn in about *February* with a slight digging, but not too deep, which should be performed in a dry Season and not in wet, lest it occasion the Ground to bind too much, and cause the Weeds to grow. But to forward Grapes ripening, and to make them fruitful, the Blood of Beasts mixed with Lime or Soot is very good to lay the Roots of the Vines in *December* and in *July*; and if the Season is very dry, the watering of Vines in *August* is a great Advantage.

But in our cold Climate, where we are obliged to plant them against a Wall, or other Shelter, Vines should be pruned only of those Branches that are unthrifty, which are flat and grow dry in Winter; so that you perceive no Sap in them when you cut them, for the plenty of Grapes, which they cannot bear, extracts so much of the Nourishment of the Vine, that



it will rather decrease every Year than grow too luxuriant. And besides, the more Wood you have, the more Fruit you may expect, because 'tis only the present Year's Shoot that bears; and therefore take away as much of the old Wood as you can, that has only a few good Branches, and bend them downwards as low as you can well do, and from them will grow young Roots; but if they run too much to Wood, cut off the worst of the Branches, rather than shorten them, because it causes them to be rough, and not to shoot out young Branches. If an old Vine bear not well, lay down a Layer of some of the strongest branches of the foregoing Year that grows low, and from that Layer nurse up a young Vine, and cut the old Vine away as the new one spreads upon the Wall.

Gather your Grapes in a dry Day, when they are very plump and transparent, which is when the Seeds or Stones are black and clear, not viscous or clammy, when the Stalks begin to shrivel at the part next the Branch, which is a sign it hath done feeding; only you must take care if Rain come, and Frost immediately follow, to gather them as soon as you can.

It is best to cut and not to pull the Grapes from the Vine, and to put them in Baskets, out of which, empty them gently, and lay them on heaps on a Floor, to sweat for four or five Days, or a Week's time, which will ripen them much.

If you would make Claret, let it remain with the Murc or Husk still the Tincture be to your liking, but the White Wine may be pressed out immediately.

When the White Wine is turned, some propose to stop it up immediately, and say that it will not hurt the Cask, and leave half a Foot or more void; and for Claret leave something more, which they replenish at ten days end (when the fury of working is over) with some proper Wine that will not provoke it to work again. This must be frequently repeated, for new Wine will spend and waste somewhat till it is perfect.

This



This is the manner of *Languedoc*, and the Southern parts of *France*, and about *Paris* they let it abide with the Must in the Must two Days and Nights for White Wines, and at least a Week for Claret; but then they observe to let it be well covered.

In some parts of *France*, they Tun it when it hath wrought in the Kelers, filling of it up (as before is described) with what is squeez'd from the Husk, which some think very practicable with us.

Whilst the working and filling of it up continues, keep it as warm as you can, by closing up any Northern Windows, if you have any in your Cellar, lest it sour the Liquor, and about the expiration of *March*, stop your Vessel for good and all. Some about this time roll their Cask about the Cellar to mix it with the Lees, and after a few Days Re-settlement, they rack it off with great Improvement.

Put into your Vessel the plaining, or Chips of green *Wine to* Beech, the Rind being carefully peel'd off; but first *fine.* boil them in clean Water about an Hour's space to extract their rankness, and then dry them in the Sun, or an Oven: Less than a Bushel of Chips will be sufficient to fine a whole Tun of Wine, and it will set your Wine in a gentle working, and purifie it in twenty four Hours, giving of it a good and agreeable Flavour.

These Chips may be wash'd again, and will serve the better upon the like Occasion, even till they are almost consum'd. Let your Chips be plained off as long and large as you can get them; and put them in at the Bung.

Some sweeten their Wines (to prevent harshness) with Raisins of the Sun trodden into the Fat being a little plump'd before, or by boiling one half of the Must or Liquor in a Vessel for an Hour, scumming of it, and running of it up hot with the other.

But the best Method that I have met with to make *English* Wine, is after the Grapes are pick'd from the *Wine.* Stalks to press them, and let the Juice stand twenty four hours in the Fat, draw it off from the gross Lees, and put it up into a Cask, and to every Gallon of



of Juice add a Pint or Quart of strong Red or White Port, according as you desire it in Strength. Let it work together, and when it hath done, Bung it up close, and let it stand till *January*, at which time in dry Weather Bottle it; this way I have made as good Wine, as any *French* Wine without any Adulteration, which consisting of four parts of our own Product, and but one of Foreign, must be of advantage for the promotion of our own Grapes.

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Chap. XXII. *Of gathering of Fruit.*

**Y**OUR Trees having attained to their desired end of bearing Fruit, it will be necessary to consider the Methods to be used in gathering, transporting and keeping of it.

*Gathering  
of Fruit.*

As to the gathering of Fruit, care must be taken to do it without bruising, especially of such as you design to keep, and that you do it when they are arrived at their due Maturity, at which time they are not only best for eating, but keeping too. Fruit ripens sooner or later, according as the sort is, and the Season of the Year falls out, or that they are situated and sheltered, and that the Soil is either hot or cold. But the best time for the gathering of Winter Fruit, is about *Michaelmas* after the first Autumn Rains come, when the Tree, being sobbed and wet, swells the Wood, and loosens the Fruit: Or when the Frosts advertise you that 'tis time to lay them up, beginning to gather the softest Fruit first, but mind never to gather Fruit in wet Weather.

*Transport-  
ing of Fruit.*

For the Transportation of Fruit, or the carrying of it to Market, &c. Apricots, Peaches, Figs, Strawberries, Cherries, Raspberries, &c. require Water-carriage, or to be carried on Men's Backs; but for Peaches or Apricots, they should be laid upon that part that the Stalks grow out of without touching of one another, and to be laid upon a Bed of Moss, Fern, or Leaves, or to be wrapped up in Vine Leaves. And  
in



in case several Beds be laid one upon another, a good quantity of Moss ought to be laid between them.

Figs are very tender, and therefore each Fig should be wrapped in a Leaf, and small Partitions made with Splinters, like the bottom of Sieves, to part each Layer in the Basket, that so they may not lie one upon another.

Plumbs may be put in a Basket without any other Ceremony, than the laying of Leaves at the bottom and top.

Strawberries and Raspberries are commonly put into small Baskets made on purpose for them, and the Leaves laid at top and bottom, and stuffed by the sides.

Apples and Pears are commonly packed in Baskets, with a good quantity of Straw at the bottom and top.

As to the preserving of Fruit, if it is Summer Fruit (especially Peaches) they must be laid in a dry place on Shelves with the Windows always open, and upon dry Moss, or other soft things that have no ill-scent or savour; for Peaches like Melons eat better for being gathered a Day or two before they are eaten. All Fruits must be visited daily, and the rotten ones pick'd out, lest they should infect the other. Pears may be placed with their Eye downward, but beware of laying of them, or Apples upon Hay. Wheat or Rye Straw, which will give the first an ill flavour, and leave the other none; the best Straw is that of Oats, but Fern or Blankets is much better.

The best way to keep Grapes is to hang them up in the Air fastned to a Packthread; but if any are desirous to preserve them 'till towards Spring, they must be gathered before they are perfectly ripe, and care must be taken constantly to pick out those that are rotten. Some say, the best way to keep them, is to hang them up in a Barrel, which may be headed up so close that no Air may come at them. Some lay them in a Cask in Oat-chaff.

But as Apples and Pears are of long duration, it will be necessary for those that are curious in keeping of them,



them, to have a Conservatory or Store-house made after this manner: Choose some place in your House the most convenient for this purpose, which should have the Windows and Overtures narrow, to prevent the Extremity both of Heat and Cold. These should always be kept shut, except in very fine Weather.

About the Room should be Shelves made one above another, and the middle be left to lay Fruit in on Heaps, such as are the most common, or that you design for Cyder; but if your Room be narrow, then only Shelves on one side, and the two ends will be enough.

Let your Shelves be laid upon Brackets, being about two Foot wide, and edged with a small Lath to keep the Fruit from rolling off, and place them about a Foot asunder.

And as you gather your Fruit, separate the fairest and biggest from the middling, and such as are fallen off themselves, or that were thrown down in gathering: And putting each sort into Baskets, as fast as you gather them, carry them into your Store-house, and range them upon your Shelves, so as that they may not touch one another, laying of Fern under them, and having of a good quantity more of Fern by you, cover them well up with it, and in case of Frost you may lay Blankets and other things to secure them; but in very severe Frost, some commend a wet Sheet to lay over them, as the best thing to preserve them. Be sure your Fern is very dry, let it be cut in Summer while the Sap is in it, and that it have contracted no ill savour or mustiness.

Where you keep your Fruit, 'tis a good way to lay each sort by themselves, especially those which are least lasting, and the most durable by themselves.

All Fruit at a Thaw will give, and be moist, at which time let them lie without touching, except those you take for present Use; and so likewise during great Rains only as in Frost, 'tis best to keep them as close as you can, so in wet Weather 'tis best to let in all the Air, especially about the middle of the Day.

And



And every other Day look carefully to the Apples and Pears, and take out all that are specked or rotten, lest they infect the others.

As for the time of Fruits being in Season and their lasting, I shall have occasion to mention a great number of them in the Kalendar.



B O O K XVII.



Chap. I. *Of English Liquors.*



A V I N G given an Account of the way of ordering, managing and improving of Corn, Fruits and Flowers; I shall in the next place endeavour the Improvement of *English Liquors*, which is a part of Husbandry that I think is too much neglected; and therefore I shall give the best help towards it that I can, and begin with Beer, as the most common Liquor, and what for the want of good Management, is generally the most spoil'd, of any Liquor we make.

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Chap. II. *Of Beer and Ale.*

I N the brewing of Beer, two things must particularly be taken care of; First, Good Malt, which I have already given an Account how to make. And, Secondly, Good Water that is soft, and will bear Soap, for harsh Water makes not only unpleasant Beer or Ale, but likewise requires much more Malt than soft, and that in proportion to the harshness or softness of it; and Lastly, Being provided with good Hops.

First,



First, Heat a Hogshead of Water, and cover it with Bran; when it is scalding hot, put one third part of it into the Mashing-tub, and there let it stand till the Steam is so far gone that you may see your Face in the Liquor, then stir in four Bushels of Malt, and let the remainder of the Water in the Copper boil a little, then draw out the Fire, that the heat of the Water may be qualified before you put it to the Malt, and when it is of a due heat, add it to the other part that was put into the Mashing-tub before, and stir it well again, putting up two or three Shovels full of hot Wood-coals upon it, to take off any ill Taint of the Malt: Then let it stand two Hours, in that time heat a Hogshead more of Water; and when your first Wort is drawn off, put part of it upon the Grains, and stir in three Bushels of fresh Malt; if you intend to make Ale at the same time, then add the rest of the Water and stir as before; after which put your first Wort into the Copper again, make it scalding hot, and put part of it into a second Mashing-tub, and when the Steam is gone, stir in three Bushels of fresh Malt, then put up the rest of the Wort, and stir it well, as before, letting of it stand two Hours, and put another Hogshead of Water into your Copper, and when what was put in the first Mashing-tub has stood there two Hours, draw it off, as also that Liquor in the second Mashing-tub, and take the Grains out of the second Mashing-tub, and put them into the first, and put the Water that was scalded in the Copper to it, which let stand in the Mashing-tub an Hour and an half at most; and while that is standing, get ready another Copper of Water (the Copper containing about a Hogshead) which put upon the Grains, and let it stand as before; only note, that in all the Mashings; (when you think that the Liquor hath stood long enough upon the Malt) before you let it run out, you draw out some of the Liquor first, and see if it run clear; if it doth, draw it off; if not, fling it up again, and let it stand till it doth. Then take the first Wort



Wort and boil it with two Pound of Hops, two Hours, or till you find it look curdly; after which boil the second Wort for Ale an Hour and an half, with three quarters of a Pound of Hops, and the Hops that were boiled in the first and second Wort, boil in the remaining Liquor an Hour and an half, which quantity will make a Barrel of Strong Beer, and a Barrel and a half of Ale, and one Hoghead and a half of Small-Beer. This is the best way of brewing your *March* and *October* Beer.

But for the Brewing of Small-Beer, or common Ale, take something above the quantity of a Barrel of Water scalding hot, which put into your Mashing-tub alone; let it cool till you can see your Face in it, and put to it four Bushels of Malt, pouring of it in by degrees, and stirring of it well: Let it stand on the Malt two Hours (observing the same Method as before proposed for Strong-Beer) then draw it off, and let it boil an Hour and an half in Summer, or an Hour in Winter; and when it is boiled enough, it will look curdled. Of this first Wort you may make a Barrel of Ale: After this is boiled, scald about a Barrel of Water more, and put it upon your Malt, letting it stand an Hour and an half: This draw off, and put the same quantity of hot Water on again, observing the same Rules, as before directed; of this you may make an Hoghead of Small-Beer. When you put it together to Work, take care that it is not too hot, and when you put Yeast to it, put it to a small quantity at first, and add more and more to it by degrees, and when it hath work'd twenty-four Hours in the Tub, Tun it up. But if you brew Small-Beer alone, two Bushels of Malt and a Pound and a half of Hops will make a Hoghead of good Small-Beer; or eight Bushels of Malt will make a Barrel of Ale, and three Hogheads of Small-Beer.

These Proportions of Brewing are for a small Family, which I chuse to Instance in, because others may easily proportion it to larger Quantities as they please.

To



To what hath been already mentioned, I shall add the manner of brewing of Ale and Beer, published by Sir *Jonas Moor* in a small Treatise of his; which as it contains a great many particulars, and is recommended from his own Experience, may be of use to the Publick, which take in his own Words.

In the brewing of Ale and Beer, after you have made a discreet choice of your Materials, you must first consider what sort of Drink you design to Brew, and accordingly proportion your quantities. If you design your first Wort for Strong-Ale, or *March* or *October* Beer, you must proportion five Gallons of Drink to every Bushel of Malt (that is to say avoiding Fractions) eleven Bushels of Malt to an Hogshead of Ale or Beer. But it must be remembred, that in so great a Disproportion of Malt Drink as eight to five, almost a third of your Liquor in the first Wort will be absorbed by the Malt never to be returned, and an allowance is to be made of about a sixth part to be evaporated in boiling; so that if you expect to clear a Hogshead of Drink, that is, fifty four Gallons, from your first Wort, you must put into your Mash-tub near ninety Gallons of Liquor. But for your second or third Worts, the Malt being wet before, you need put up no more Liquor than you intend to make Drink, except an Allowance of about a tenth Part for waste, that not boiling so long as your first Wort: And you may of your second Wort make one Hogshead of good middle Beer or Ale as strong as the common Ale-house Drink in *London*; and your third Wort will make one Hogshead of good Small-Beer.

I propose, in this Case, the drawing off three Worts, because of the great quantity of Malt to a smaller of Liquor; otherwise in ordinary Brewings, where you design not very strong Drink, six or seven Bushels of Malt will make one Hogshead of good Strong, and another of Small-Beer. And in such Cases, two Moakses will as well take out the strength of your Malt, as three in the other.



The proportion of Hops may be half a Pound to an Hoghead of Strong-Ale, one Pound to an Hoghead of ordinary Strong-Beer to be soon drunk out, and two Pounds to an Hoghead of *March* or *October* Beer. And for the after Worts, which are not to be kept long, what comes from the first Wort will serve well enough to boil again with them.

If you put into your first Wort a greater proportion of Hops, and boil them all the while your Wort boils, you will make it too bitter. But I conceive it adviseable to double the proportion by taking out the first Parcel, when your Wort has boiled half the time you design it; and then adding the same quantity of fresh Hops, to continue boiling till you take your Wort out of the Copper. This will somewhat encrease your Charge, but that will be very inconsiderable, if you furnish your self in a cheap Year of Hops.

Hitherto of the Qualities and Proportions of your Materials, now concerning the manner of putting them together.

After you have put your Liquor into your Copper, strew an handful, or two or three handfuls of Bran or Meal upon it, not so much to strengthen your Liquor, as to make it heat quickly, for simple Water alone will be long e're it boil. But you must take your Liquor out of the Copper, when it begins to simmer, and not suffer it to boil; for tho' it were granted that the boiling did no harm to your Liquor, by evaporating the natural Spirit of the Water; yet it is a needless expence of Fuel and Time, first to make it too hot, and after to stay till it is cooler again. For you must by no means mix your Malt with boiling hot Liquor, which will make Malt clot and cake together, and the most flowery parts of it run whitish, glewy and fizie, like Sadler's Paste, so that it will never mix kindly, nor give out its strength equally to the Liquor.

I had not dwelt so long on this Head, but that I know many put their Malt first in the Mash-fat, and



then pour in their Liquor for the first Wort, which is indeed necessary in the second and third Worts.

The contrary Practice of putting in your Liquor first hath these Advantages.

First, You can never otherwise guess when your Liquor is just cool enough to be mingled with your Malt. But in this case you have a certain Criterion and Rule to judge, that is, you must let your Liquor remain in your Mash-fat, till the Vapours from it be so far spent, that you can see your Face in the Liquor: And then pouring your Malt upon it, you have this farther Advantage, that you keep your Liquor longer hot, and it sinks gradually, distributing its strength to your Liquor equally without matting; and if it does not descend fast enough of it self, you must press it down with your Hands or Rudder, with which you use to stir your Malt or Moaks. This must be done by degrees, always remembering that you shake your Sacks before you remove them, over the side of your Mash-fat, to get out the Flower of your Malt which sticks to them; and after all your Malt is settled and your Liquor appears above it, you must put up in your Mash-fat as much more hot Water out of your Copper, as will make in all ninety Gallons for one Hogshead: Then stir it almost without ceasing, till it has been in the Mash-fat about two Hours from the first putting up your Malt, in which your Servants may help and relieve one another.

After this pull out your Rudder, and putting a little dry Malt at top, cover it close, and let it stand half an Hour undisturbed, that it may run off clear, and the Malt being sunk to the bottom, the Liquor at top will run thro' it again, and bring away the strength of it. After this, you must lift up your Tap-staff, and let out about a Gallon, not into your Tub underneath or underback, which is to receive your Wort, but into your long Hand-jet, and put it back again, stopping your Tap-hole: This do two or three times, till you find it runs clear, which it will not do at first, tho' your Tap-hose be never so well adjusted. Through-



Throughout the whole course of your Brewing, you must be very careful to do all you can to promote the fineness and clearness of your Drink.

In the North of *England*, where much the best Malt-drink is made, they are so careful of making their Drink fine, that they let their first Wort stand in their Receivers till it is very clear, all the gross Parts being sunk to the bottom; this they continue to do about three Hours in Summer, and ten or twelve Hours in the Winter, as occasion requires, which they call *Blinking*: After which, leaving the Sediment behind, they only lade out the clear Wort into the Copper. This Custom is peculiar to the North, and wholly unpractised in other Parts.

When all is run out into your Receiver, or Underback, Lade or Pump out your second Liquor, ordered so as to be then just ready to boil, on your Moaks, and putting your first Wort in your Copper again, let it boil reasonably fast (which boiling, the Hops put on it will much accelerate) for about one Hour and an half for *March* or *October-Beer* to keep long, and one Hour for strong Ale to be drank new. I know that a longer boiling is generally advised; but that I shall answer when I come to shew the Reasons, why common Brewers seldom or never make good Malt-drink. I advise the Wort rather to be boiled reasonably fast for the time, than to stand so long to Simmer, because common Experience shews it wastes less, and ferments better after so long boiling than simmering.

Your first Wort being thus boiled, must be pumped or laded off into one or more Coolers, or Cool-backs, in which leave the Sullage behind, and let it run off fine. The more Coolers, and the thinner it stands, the sooner it cools (especially in hot Weather) the better; let it run from your Cool-back into your Tun very cool, and set it not there to Work in Summer till it is cool as Water. In Winter it must be near Blood warm at least; the Bowl in which you put your Yeast to set the rest on Working, must have a mixture



of Wort hot enough to make it all ferment: When you find it begins to work up thick to a Yeast, mix it again with your Hand-jet: And when it has wrought it self a second time to a Yeast, if you designed it for Ale, and speedy drinking, and hopped it accordingly, beat in the Yeast every five Hours for two Days together in the Summer-time, or more, according as the Weather is, and for three or four Days in the Winter, covering your Fat close, that it fall not in your Working-Tun.

When your Yeast begins to Work sad, and upon the turning of the Concave of your Bowl downwards sticks fast to the inside, then skimming off the Yeast, first cleanse the rest into your Vessel, leaving all your Dregs in the bottom of your Tun, and putting only the clear up. After it has a little fermented in your Vessel, you will find it in a few Days fine and fit for your drinking, tho' according to the quantity of your Hops, you may proportion, if for longer keeping.

If you Brew in *March* or *October*, and have hopped it for long keeping, you must then upon its second Working to a Yeast (after once beating in) cleanse it into your Vessel with the Yeast in it, filling it still as it Works over, and leaving when you stop it up a good thick head of Yeast to keep it.

In brewing *March* and *October* Beer, it is adviseable to have large Vessels, bound with Iron Hoops containing two, three, or four Hogshheads, according to the Quantity you intend to make, putting all into one Vessel; this sort of Drink, keeping, digesting and mellowing best in the largest Quantities.

Your Vessels must be Iron-hooped, else your *March* Beer will be in danger to be lost or spoiled; leaving your Vent-peg always open palls it; if it happens to be fastened but six Hours together in the Summer, a sudden Thunder or stormy Night may happen next Morning to present you in your Cellar an empty Vessel, and a covered Floor.

It is pretended, that *March* is the best Month for brewing, and the Water then better than in *October*; but



but I always found that the *October Beer*, having so many cold Months to digest in, proves the better Drink by much, and requires not such watching and tending as the *March Beer* doth in opening and stopping the Hole on every Change of the Weather.

Many Country Gentlemen talk of and magnify their stale Beer of Five, Ten or more Years old; it is true, more Malt and Hops than I propose will keep Drink longer than I use to do; but to small purpose, for that it will not exceed mine in any thing desirable, except such an extraordinary strength as few Men care for; I always broach mine at about nine Months end, and my *March Beer* at *Christmas*, and my *October Beer* at *Midsummer*, at which time it is generally the best; but will keep very well in Bottles a Year or two more. Stop your Vessel close with Cork not Clay, and have near the Bung-hole a little Vent-hole stopped with a Spile, which never allow to be pulled out till you bottle or draw off a great quantity together; by which means it is kept so close stopped, that it flushes violently out of the Cock for about a Quart, and then stops on a sudden, and porles and smiles in a Glass like any bottled Beer, tho' in the Winter time. But take care, if once you pull out the Vent-peg to draw a Quantity, or else it will sensibly lose this briskness, and be some time before it recovers it.

I propose no Directions for the second and third Worts; he that can manage the first well, can never fail in the rest. Your third Wort being poured on hot Goods, may be only cold Water.

But which is the best Method to be used, I must refer to Experience.

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### Chap. III. Of Nottingham *Ale*.

**T**HE chief thing that they observe in making of it, is, only when it is working, to let it stand in a Tub four or five Days before they put it into the Cask, stirring of it twice a Day, and beating down the Head or Yeast into it; this gives it the sweet Aleish taste.



If Ale or Beer do not fine well, put into a Hoghead two or three Bottles of old stale Beer or Ale, and it will much help it.

If Beer be flat or fowre, put into a Hoghead a pint of Horse-bean-flower, a pint of Wheat-flower, mix it with Yeast to the consistency of a Pudding, and it will recover it.

Take Grains, and lay a layer of them and of your boiled Hops, upon them, and so on, and they will keep good a long time; and if they are given to a Hide-bound Horse, they will strangely recover him.

Mr. *Martin*, in his Description of *St. Kelda* says, that the Inhabitants when they brew Ale, take the juice of Nettle-Roots, which they mix with a little Barley-meal dough: These Sowens (that is Flummery) being blended together, produce good Yeast.

#### Chap. IV. *Of Cyder.*

**N**EXT unto Beer, Cyder is of the most common use, of which excellent Liquor there are several ways of making it according to the Skill of the Operator, and the Palates of those that are to drink it, some esteeming one sort of Cyder best, and some another, according to the Fruits it is made of, and the Methods used by them that make it.

Now Cyder-Fruit may be reduced to two sorts or kinds, either the wild, harsh and common Apple, growing in great plenty in *Hereford*, *Worcester* and *Gloucestershire*, and in several other adjacent Places in the Fields and Hedge-rows, and planted in several other Places of *England* for Cyder only, which are not at all tempting to the Palate of a thievish Neighbour, not requiring the Charge and Trouble of the more reserved Inclosures.

Or the more curious Table-Fruit, as the Golden Pippin, the *Kentish* Pippin, and Pearmain, &c. which are by many preferred, having in them a more cordial and pleasant Juice than other Apples.

For



For the former, the best sorts for Cyder are found to be the Redstreak, the White Must, the Green Must, the Gennet Moil, *Eliot's* Stocken Apple, Summer Fillet, Winter Fillet, Broomsbury Crab, the Olive Underleaf Apple, and the Fox Whelp; the Cyder of which comes not to be good 'till 'tis three or four Years old.

The greater part of them being meerly Savage and so harsh that hardly Swine will eat them, yet yielding a most plentiful, smart and vinous Liquor, comparable, if not exceeding the best *French* Wine; and for the Advantage of planting of them they claim the Preference before Pippins, or any other of our Garden-Fruit.

The other sorts of Fruits for the making of Cyder, are, as I said before, the Golden Pippin, Kentish Pippin, Pearmain, Gilliflower, Kirton Pippin, Mother Pippin, &c.

The best sorts of Cyder-Fruit are far more succulent, and the Liquor more easily divides from the Pulp of the Apple than in the best Table-Fruits.

Some observe the more red any Apple is the better it is for Cyder, and the paler the worse, and that no sweet Apple that hath a rough Rind is bad for Cyder; but the more inclinable to yellow the fleshy part of an Apple is, the better coloured the Cyder will be.

Apples of a bitter taste will spoil your Cyder, but the Juice of them, and of Crabs, will make as good Spirits as the best Apples when fermented; for neither the sowre nor the bitter taste arises with the Spirit. *Gathering of Apples.*

Let your Apples that you make Cyder of be thorough ripe, and be carefully gathered without Bruises in dry Weather; it very much conduces to the goodness and lasting of the Cyder, to let them lie a Week or two on Heaps; the harsher and more solid the Fruit is, the longer they may lie, and the more mellow and pulpy the less time, which makes them sweat forth their Aqueous Humidity, and digesteth and meliorates the remaining Juice, but they will yield more from the Tree, than so kept.



Such as are windfalls, bruise'd, or any ways injur'd, or unripe Fruit, divide from the sound and ripe.

For it is better to make two sorts of Cyder, the one good and the other bad, than for all to be bad; the sooner such Fruit is pressed the better; and from your Apples take away all Stalks, Leaves and rotten Apples; because Stalks and Leaves give an ill taste to the Cyder, and rotten Apples make it deadish.

Let such Apples as fall before they are ripe be kept till the time of the full maturity of the other Fruit, or else the Cyder will not be worth drinking.

About twenty or twenty two Bushels of good Cyder-Apples, just gathered from the Tree, will make an Hogshead of Cyder; after they have lain a while in heaps to mellow, about twenty five or thirty Bushels will make an Hogshead.

They that have great Quantities usually grind their Apples with a Horse-mill, such as the Tanners grind Bark with, but the new invented Engine described in *Mr. Worlidge's Vinetum Britannicum*, is a very good Mill, and will grind a great quantity.

After your Apples are ground they should be made up in Straw, or in an Hair-Bag, and so committed to the Press; of which there are several sorts, but the Screw-Press is the best.

But as there are several ways of making of Cyder, as well as several sorts of Fruit to make it of, and that some esteem one sort of Cyder, and some another, according to the manner of its making, and the Fruit it is made of, as I said before, I shall endeavour to give you several of the Methods I have met with, and leave them to your Experience. But,

I think the chief way of improving of this Liquor would be a particular Management of it according to the Species of Apples it is made of (especially what is made of the chief Cyder-Apples.)



*Chap. V. Several Ways and Methods of making Cyder.*

**A**S first that of Mr. *Worlidge*, who proposes, that when your Cyder is press'd out it should stand a Day or two, or more, in an open Tun, or cover'd only with a Cloth or Boards to keep it from Dust, or in a Hoghead or other Vessel not quite full, with an open Bung, till the more gross Parts subside, and then to draw it into Pails, and fill it up into the Vessels you intend to keep it longer in, leaving about an eighth part empty. Set these Vessels in your coldest Cellars or Repositories with the Bung open, or cover'd only with a loose Cover, that there may be a free Perspiration of the Volatile Spirit of your Must, which would otherwise force its way, and that your Must may be cool and not kept warm, lest it ferment too much.

Thus standing open, the better it will by degrees let fall its grosser Parts, and in time become clear without the loss of any of its true and durable Spirits. For coldness is here the cause of its purifying, warmth occasioning the solution and detention of those Particles that spoil the Colour and Taste of Cyder, and which would otherwise precipitate.

As for the time of its standing open in the Vessel, it varies according to the nature of the Fruit; if the Fruit were mellow or sweet, the more of the gross Particles will be press'd out with the Liquor, and so the longer time will be requir'd for their Precipitation; But if the Fruit were hard or sharp, the thinner doth the Liquor issue out of the Press, and the sooner will your Cyder become fine: And you must be sure to observe, that as soon as this Cyder of hard Apples is fine, you must draw it off from its precipitated Lees, lest it become acid, or acquire some ill taste from them.

This standing open of the Vessel causeth an expence of that Wild or Volatile Spirit, which being pent in, would beget a continual Fermentation, much prejudicing



cing the Cyder; and in case it doth not otherwise work its way out, would in time break the Vessel that detains it.

The principal Cause that there hath been so much bad Cyder made in most parts of *England*, was the too early stopping of it up: It being usually prescribed, and as usually practic'd, that as soon as Cyder is prest, strain'd and fermented, they stop it close with a very great Confidence, that unless it be close stopped it will decay and become of no use; so that when these Cyderists have taken care for the best Fruit, and ordered them after the best manner they could, yet hath their Cyder generally proved pale, sharp and ill tasted, &c. and all from the too early stopping of it. For the Stopping of Cyder close before it be fine, or with its *Fæces* in it (although precipitated) begets reiterated Fermentations, which Fermentations very much impoverish the Liquor by precipitating those Particles, which enrich it with Tincture and Gust.

Whilst its gross *Fæces*, or any settling remain in the bottom, every change of Weather causes some Motion therein, which is usually term'd Fermentation; this doth so attenuate this Liquor, that it easily letteth or suffereth those Particles to subside, and leaveth the Cyder thin, jejune, acid, and ill tasted. It is thin and jejune, because it hath lost its Substance; acid, because it hath lost its Sweetness; those Particles being the Saccharine Substance, or part of the Apple, and of ill Savour and Gust, because those Particles when precipitated, being mix'd with the more gross, do putrefie and heat, infecting the whole Mass in the Vessel: All which effects are apparently obvious in Cyder made after the vulgar Method. These *Fæces* are the cause, that the Corks fly out of the Bottle, or break the Bottles, or at least at the opening of them make the Cyder fly, and mixing with it make the residue unpleasant.

These things being generally taken notice of, have set many Heads at work to provide Remedies: Some have made use of many ways to ferment it and make it  
clear



clear by reiterated Fermentations; others by Additions, as Ifing-glass, &c. have enforced a Precipitation, and when they have so done, finding it to be thin, pale and acid, have by Molosses, Treacle, or course Sugar given it Body, Colour and Gust. What delight or pleasure there can be in drinking such Compounds, or how much this must conduce to Health and long Life, I leave every unprejudiced and ingenious Man to judge.

After your Cyder hath stood open some reasonable time, till it is become indifferently fine, which it may be in three, four or five Weeks, then will it be convenient to draw it into Bottles, if you have a sufficient Stock, or into other Casks, that it may there become more fine; for after it is separated from its gross *Fæces* it will more easily remit the remaining Particles or flying Lee, than it would have done whilst the grosser parts remained, renewing its Fermentation on every change of Air, or other accidental Occasion.

Its Fineness will sometimes plainly appear if you move the Scum aside with a Spoon, or the like; but to be more exact, you may take a Glass Pipe of a Foot or more in length, open at both ends, stop the upper end of the Pipe with your Thumb, and let the other end down into the Cyder as deep as you think fit, then open the upper end, by removing your Thumb, and the Cyder will rise in the Pipe; then stop the upper end again with your Thumb, and take out the Pipe and hold it over a Drinking-glass, remove your Thumb, and you may there discern the state and fineness of your Cyder.

If your stock of Cyder be not over-great, or that you are willing to preserve your choicest sorts of Cyder, the best way is to have large Glass-Bottles of one or two Gallons apiece, more or less, enough to receive the same, into which draw off or rack your Cyder, and let the Bottles stand open, or but barely covered, in your coldest Repository for a Month, or more, till you observe your Cyder, by your interposing it between a Candle and your Eye, to be very transparent; which



which then may be called Superfine, the remaining Particles, or flying Lee, being precipitated and settled in the bottom of the Glass-Bottle.

If the quantity of your choicest Cyder be too great for your Bottles, you may instead of them make use of Stone-Bottles, or Jars, or Stounds of *Flanders* Earth, or glaz'd Earthen Vessels, the larger the better; which may be plac'd in Rows in your Repositories, Cellars or Vaults, and cover'd with Boards or the like, to preserve your Cyder from Dust, &c. but not from the Air; but by reason that you cannot so easily discern the fineness of your Cyder in these as in the transparent Vessels, you may now make use of your Glass-Pipe before-mentioned.

The reason why Glass-Bottles, or other glazed or stone Vessels are more fit for this second fining than those of Wood is, for that the coldness of the Vessel very much contributes to the Precipitation of those remaining Particles that would otherwise debase this Liquor.

But if your quantity of Cyder be so great, that these Vessels cannot receive it, then may you rack it into other Vessels made very clean, dry and sweet, and suffer'd to stand slightly cover'd till it be very fine before you stop it up: If you find that your Cyder doth not fine in wooden Vessels so soon as you desire, for want of that coolness that is in glazed Vessels, you may take Flints or Pebble Stones clean and dry, and put them into your Cask of Cyder, this is said (and with great probability) to contribute much towards the nimble Precipitation of the *Fæces*; the like effect hath the applying of a Bag of Salt to the outside of the under part of the Vessel.

When your Cyder has attained its utmost degree of fineness, which after this way of ordering it will do if you have but patience to let it stand open long enough (altho' some will fine in half the time that other requires) then take your Glass, Syphon or Crane, and draw it off from its last *Fæces* into smaller Bottles, wherein



wherein you intend to keep it for your use. Thus being drawn off, and thoroughly depurated, you may close cork all your Bottles, and place them in your cool Conservatory, where, after a few Weeks standing, your Cyder will acquire a fine briskness, and mantle in the Glass, without any manner of Feculency, and retain its first Sweetness, and change from a pale to a lively Canary, or *Malaga* Colour; but if you have occasion to accelerate its Maturity, place so many of your Bottles as you think you may have sudden occasion for, in some place warmer than your usual Conservatory, and it will soon answer your Expectation.

Sometimes it will happen, that the next Summer after it is become so pure, some Rags or flying Feculencies may appear in your Bottles, which are occasion'd by the warmth of the Season begetting another Fermentation from that fatness of the Body of the Cyder made of a sweeter sort of Fruit, which are not apt to appear in the thinner Cyder; but in some short time these will subside, and you may draw off the Fine from the *Fæces* with your Syphon, without any great prejudice to your Cyder. These later Fermentations in great Quantities of Cyder often spoil it for want of a timely prevention, which cannot be so well done in Vessels of Wood as those of Glass, where you may easily perceive the various Changes that may happen in these Liquors. Thus far you have Mr. *Worlidge's* Opinion of this Liquor.

Mr. *Langford* proposes in the making of Cyder, to take the Liquor, as soon as press'd, and strain it through a Sieve, and so to tun it up into a Cask, which should want about two Gallons of being full, which stop up only with a loose stopper for two or three Days; and then stop it up close with Clay, and put a Peg into the vent hole loose, which for a Week's time or more you may once a Day draw to give it a little vent; then stop it up close and let it stand till you think it clear, and pierce it to see how it fines; the Summer Fruit after a Month, the Gennet Moyl after  
3 the



the first Frost, and the Redstreak or other Winter Fruit not 'till *January*.

*Mr. Cook's way of making of Cyder is after this manner:*

Let your Fruit hang till through ripe, which is best known by the brownness of the Kernels, or their rattling in the Apple, or the Apples falling much in still Weather; for if the Fruit be green, your Cyder will be sowre. Gather your Apples dry, and reject such as are bruised, because they will rot and spoil the taste of the Cyder.

If you gather not by hand, which is tedious, lay a Truss of Straw beneath the Tree, and over that a Blanket, discreetly shaking them down, not too many at a time, but often, carrying them where they are to sweat, which should be on dry boarded Floors; by no means on Earth, unless store of sweet Straw lie under them. In about ten or fourteen Days they will have done sweating, then grind or beat them, keeping the Fruit several, in case you have enough to fill a Vessel of one kind; if not, put such together as are near ripe, for its more uniformly fermenting: Winter-Fruit may lie three Weeks or a Month e'er you grind them; the greener they are when gather'd, let them lie the longer.

Being ground let them continue twenty four hours before pressing, it will give it the more Amber bright colour, hinder its over-fermenting, and if the Fruit were very mellow, add to each twenty Bushels of Stampings, six Gallons of pure Water pour'd on them so soon as beaten; the softer and mellow the more Water to restrain its over-working, and tho' the Cyder be weaker it will prove the pleasanter: For over-ripe and mellow Fruit let go so much of the loose and fleshy Substance thro' the Percolation, that with difficulty you will separate the Lee from the Liquor before it ferment, and then away goes the brisk and pleasant Spirits, and leave a vapid or sour Drink contracted from the remaining gross Lees; the Cyder made of such Fruit, had need be settling twenty four



hours in a large Fat or Vessel, that the *Fæces* may settle before you tun it up, and then draw it off, leaving as much of the thick Lee behind as you can (which yet you may put among your pressings for a Water Cyder :) If you conceive your Cyder still so turbid that it will work much, then draw it into another Vessel by a Tap two or three Inches from the bottom, and so let it settle so long as you think it is near ready to work; for if it work in your Tubs, but little of the gross Lees will you be able to get from it. *Note*, That you must cover it all the time it is in your Tubs, and the finer you put it up in your Vessels, the less it will ferment, and the better it will drink; but in case you chill the Cyder (as it often happens in cold Winter Weather) so as it doth not work when put into Casks, cast into it a Pint of the Juice of Ale-hoof, with half the quantity of Ising-glass to refine it, which tho' it do not suddenly, at the Spring it will.

These Directions observ'd, barrel it up, and when it ceases working, Bung it close, and reserve it so till 'tis fit to Bottle, that is, when fine, since 'till then it will endanger their bursting; and if you would have it very brisk and cutting (which most affect) put a little lump of Loaf Sugar into every Bottle.

Or you may observe the following Method, which is, That after your Cyder is press'd, to strain it, and put it into a Tub or Fat with a Tap to it, which cover close with Sacks or Cloths, by which means some of the Spirits will have Liberty to evaporate; whereas, if you put it too soon into a Cask, it will reverberate the Spirits too soon into the Liquor, and cause a Fermentation before any of the gross Lees are separated from it; for the great thing to be taken care of in making of Cyder, is, only to let so much of the Spirit evaporate as may prevent its fermenting before the gross Lees are separated from it, and yet to keep Spirits enough to cause a Fermentation when you would have it; for if it ferment too much it will lose its Sweetness, and become harsh and small; and if it ferment not at  
all



all it will become dead and fowre, and therefore let it stand twenty four hours or more in the Fat; according as you find it inclin'd to work, so let it stand longer or a shorter time; and when you draw it off leave as much of the gross Lees as you can behind, for Lees of Cyder are apt to put it into a new ferment upon all Changes of Weather. After it hath stood its time in the Fat, put it into the Cask, which fill almost full; but if you find it begin to work much, rack it off again, and take out the gross Lees; and if you find it still upon a Fret, repeat the same Operation till you can settle it; for it is a very ticklish Liquor, and very subject to ferment, especially if the gross Lees are not timely separated from it; and therefore if unsettled or moist Weather happen at the time of its working, it will be so much the more difficult to manage, and will require the more care to be taken of it.

When it hath done working, stop it up, only leaving a small vent hole at your first stopping of it up, at which you may sometimes try if it want vent, lest it break your Cask.

Only I think it necessary to premise, that the suiting of the Fruit to the Soil is a great Advantage to the making of Cyder, it being certain, that in many Places, even in the same Country, there is much better Cyder made in one Place than another, tho' both are made the same way, and of the same sort of Fruit; and if particular Remarks were made of the nature of such Soils, and what the natural Production of them is, according to the nature of the several Soils already treated of, I believe it would be of advantage to Planting, and the Improvement of Fruit and Cyder.

Mr. *Worlidge* commends very much brackish Lands near the Sea-side, as excellent for Fruits; and for Winter lasting Fruit, the strong stiff Lands are much the best of any.

But if your Fruit be unripe, or your Cyder small, and that you have a mind to strengthen it, especially if you live in the North-country, you may improve it by the following Receipts.

Take



Take Pippins, Pearmaines, &c. and to every Gallon <sup>Raisin</sup> of Juice put two pounds of Raisins, which shred small, <sup>Cyder.</sup> cover the Fat, and let them stand two or three days; draw off the Liquor by a Tap, press out the Raisins, and put both Liquors into a Cask that they may ferment, and after a fortnight rack them off. Do not fill the Cask you draw it into, but leave some room for it to ferment in; after which stop it close, only leave a Fisset-hole open or loosely stopped, and when it hath done working fill up the Vessel, and when fine bottle it: Or you may do it another way.

Take your Apples when they relish best, not too green nor too mellow: They who have large Plantations may shake their Trees a little, and gather those that fall off easily, and press them the same day. Fill not your Cask above three quarters full, and let it stand till it grow clear, which is commonly within eight or ten days, and then draw off only the clear, and fill up a clean Cask almost to the top, giving it vent thrice a day, lest it should burst the Vessel, and so continue to do for a Week.

Then for every ten Gallons of Cyder take one pound of Raisins of the Sun, and put them into Brandy for a day or two, and then take only the Raisins, and put them into the Cyder, letting it stand three or four days more: Lastly, Stop the Cask very close, but bottle it not till *March*, except it be of Codlings, which will not keep so long.

Another Improvement of Cyder is, what they call Royal-Cyder, mentioned by Sir *Jonas Moor*, which is done by adding of the Spirits to it, which corrects the Windiness and Crudities of the Cyder, makes it very agreeable to the Stomach, and gives it the strength of Wine, by adding the goodness of two Hogsheads into one: To do which, put one Hogshead of Cyder into a Still, and draw off all the Spirits; after which distil the said Spirits a second time, and put the same into your other Hogshead, and fill it up. Stir it about well, and keep it close stopped, except one day in ten or



twenty let it lie open five or six hours, and within a quarter of a Year, this Cyder will be as strong or stronger than the best *French Wine*.

But if you will have it drink like Canary you must add more of the Spirits, and as much Sugar or Sweets (the making whereof is hereafter shewed) as will best please your Palate. And as the proportion of one Pint of good Spirits to a Gallon will make it as strong as *French Wine*, so one Pint and half will make it as strong as *Spanish Wine*: And by this means, in the like manner, Perry, the Juice of Cherries, Mulberries, Currants, and Gooseberries, may, by adding thereto their proper Spirits, or any other convenient Spirits, be made as strong as Wine.

I mention other Spirits, because Brandy-Spirits of Wine and of Grain, tho' they will do well, yet they are not so natural and good as what is made of the same sort of Fruit: And the Spirits made of Ale and Beer are the worst of any, unless the Ale or Beer be mixed with Cyder before the Spirits be drawn off; but the Spirits of Beer and Ale will do well to mix with the same kinds, and add very much to their strength, because a mixture much used of late with *Derby* and *Nottingham* Ale, and with strong Beer.

Only note, first, that the stale and sour Cyder which is scarce fit to drink, will make the greatest quantity of Spirits, and the best tasted; and that the longer the Spirits are kept, the less taste they will have of the Fire; which is the greatest Inconveniency that attends this way of making of Cyder; and therefore I should propose, when you design to be any thing curious, to take only the first running of your Spirits to mix with your Cyder, and to let the small part only be distilled again, to which it will be best to allow as much age as you can to take off the burnt taste; one Gallon of strong Cyder will yield a Pint of Spirits.

Asto the time of putting of your Spirits into your Cyder, observe, that the staler your Cyder is before the Spirits are added to it, the more time it will take



to incorporate, and the sooner they are put in, the sooner it will be fit for use, only be sure that your Cyder has done working before you put it in.

The best way to order your Sugar before you put it into your Cyder, is, to make it into a kind of Syrup or Sweets, by dissolving of it in Water; one hundred weight will make sixteen Gallons, and so proportionably. But before you put your Sugar into the Kettle, take the Whites of thirty or forty Eggs, the more the better; which being well beaten with a thing like a Rod or a Whisk, in eight or ten Gallons of Water; put four Gallons of this Egg-water so prepared, into your Kettle, where your Sugar is to be dissolved, then hang it over a gentle Fire, and stir it about till it is dissolved: But be sure when it boils, put in more Egg-water, to keep it from boiling too high, and so continue putting it in, one Quart after another, until all your Egg-water be spent. But to prepare your Egg-water in parcels, *viz.* a Quart or two at a time, as you use it, is the better way. Now the use of these Eggs is only to raise such a Scum as will carry away not only all the foulness and grossness of the Sugar, but all the Egg also. And when the Scum hath done rising, and is clear taken off, then fill up your Kettle with as much Water as will make up your Quantity, and let it boil to the size of a Syrup, and being cold put it into your Cyder. But if you put in a little Coriander Seed bruised and tied up in a fine Linen Bag whilst it's boiling, it will give it a fine grateful Scent.

Of these Sweets you may put in two or three Gallons, more or less, into an Hoghead as your Palate invites you, or as the Tartness of your Cyder requires. But put them not in till you have racked your Cyder the last time, and that it is past the Fermentation. And before you put your Sweets into the Cask, mix your Sweets and the Spirits you intend to put in, together with a like quantity of Cyder, and stir them well together; then put all into your Cask of Cyder, and stir them with all your strength with a strong Staff in the



Bung-hole for one half quarter of an Hour; after that stop it close, and draw none off till two, three, or four Months, by which time it will be answerable to what hath been proposed; only remember, that if you would have it resemble Canary, you must add the greater proportion of Spirits and Sweets; but if *French Wine*, the less Sweets, or none at all.

As to the sort of Sugar, if the Sweets be made with white, the Cyder will remain pale; if of brown Sugar, it will raise it to an higher colour: And in my Opinion, the latter is as good as well as the cheapest, since the coarsest, by the aforesaid Preparation, becomes as pure as the finest; and Sweets being thus made, will cost but five Pence *per Quart*.

And thus every Man may merrily make his Varieties of Drink with that which he knows to be good, cheap and wholesome, which is more than he is sure to have at every Tavern, altho' he pay three times as much for it: Nor hath he so much reason to suspect these Liquors in those Houses to be so much adulterated as the others, because none of like goodness to the Eye, Scent and Palate can be afforded so cheap to the Pocket.

The husky part of the Apples, after Cyder is pressed out, being steeped two or three Days in as much Water as will cover it, and then pressed clean out, and kept in a Vessel until it hath well fermented, as also the Lees of all your Cyder will afford Spirit or Brandy, so much, that being added to the Cyder of the same Apples, will make it as strong as *French Wine*, which is a thing of great Advantage.

Spirits being put into Bottles amongst Cyder, or of the aforesaid Liquors will not drink well. I was a long time troubled to find how to make this Drink as palatable and pleasing as it was become strong and chearing, until I put both Cyder and Spirits into a wooden Cask. The first I compleated was in a Vessel of six Gallons, into which I put two Quarts of the Sweets, and three Quarts of the Spirits of Cyder, which after



it had lain two or three Months I found to be as strong and pleasing as Canary.

By adding Wormwood to Cyder-Royal as you do to Wine, you may make it as good and grateful to the Stomach, both for procuring Appetite, and causing Digestion, as the best Purl-Royal, or Wormwood Wine. Thus you may have of your own growth Cyder-Royal, Gooseberry, Currant, Cherry, &c. from the size of the smallest Wines to the strength and goodness of the best Canary, suitable to all Seasons of the Year, and to the Constitutions of all Persons, and Humours of all Palates, and agreeable to all Ages, from Children of twelve Months old, to the height of old Age.

This Cyder-Royal, or New-Wine thus prepared, may be kept in the Cask two or three Years, and be bettered thereby, provided you keep the Cask full; which to do, you must observe, that in two Months time the Liquor will waste a Quart more or less, as the Vessel is bigger or lesser, which you ought to fill up again with Liquor of the same strength, or if stronger the better: And by this means it may be kept, and grow better and better some Years without putting into it (as some are said to do into their Liquors) Stum, or other unwholsome Ingredients. And,

Suppose by keeping Cyder-Royal too long it should become unpleasant, and as unfit to Bottle as *Old Hockamore*, take but one Hogshead of that, and one of tart new Cyder, and before the latter be quite clear or fine, mix them together in two other Hogsheads well perfumed, and add of Spirits and Sweets a due proportion to the quantity of your new Cyder: Suppose it be in the Month of *October* or *November*, you may be sure to have it full as good, if not better, than ever it was, and a most excellent Cyder-Royal to drink, or to bottle, by or before *Christmas*; and your new Cyder cannot be made half so good by that time of the Year.

As to the Objections made against this sort of Cyder, and the other Particulars relating to it, I shall refer



you to a small Treatise of Sir *Jonas Moor's* on this Subject.

Some commend very much the boiling of Cyder, as what gives a mighty strength to it; but it is much better for some sort of Fruits than others. The best sort of Cyder for boiling being what is made of Pippins, Harvey-Apple, the Bitter Sweet (a *Dorsetshire* Apple) whose Juice is much mended by boiling, especially when kept to two Years old: The way of doing which is, to boil it as soon as it is pressed; for if it ferments, the boiling will cause the Spirits to fly away instead of strengthning it; strain the Juice as it comes from the Press, and in boiling of it let it continually be scum'd, and observe the Colour of it as it boils; so as not to boil it longer than till it comes to the colour of Small-beer; and as soon as it is cold Tun it, leaving only a small Vent in the Cask, the rest being close stopped; and when it begins to bubble out of the Vent, bottle it, only make it not of Fruit that hath been gathered long.

But as Cyder is apt to contract an ill flavour from the Vessel it is boiled in, it is best to boil it in Tin or an Earthen-pot that is wide and open at the top, for the more expeditious wasting of the aqueous and phlegmatick part of the Liquor.

*Of Mixtures with Cyder.*

Tho' Cyder needs not any, it is yet a very proper Vehicle to transfer the vertue of any Aromatick or Medicinal thing, such as Ginger, Juniper, &c. The Berries dried, six or eight put in each Bottle, or proportionably in the Cask, is very good: But this is not so palatable as wholesome.

Ginger renders it brisk, and corrects its Windiness; dried Rosemary, Wormwood, Juice of *Corinths*, &c. whereof a few drops tinge and add a pleasant quickness, Juice of Mulberries, Blackberries, and (preferable to all) Elder-berries pressed among the Apples; or if to the Juice you add Clove-Gilliflowers dried and macerated, both for Tincture and Flavour, 'tis an excellent Cordial. Thus may the Vertues of any other things



things be extracted: Some stamp *Malaga* Raisins, putting Milk to them, and letting them percolate thro' an *Hippocrates's* Sleeve; a small quantity of this, with a spoonful or two of Syrup of Clove-gilliflowers to each Bottle, makes an incomparable Drink.

Honey or Sugar mixed with some Spices, and added to Cyder that is flat, revives it much, let the proportion be more or less, according to the quantity of your Cyder.

Mixture of Fruits is of great Advantage to Cyder, the meanest Apples mixed being esteemed to make as good Cyder as the best alone, always observing, that they be of equal Ripeness: But the best mixture, Mr. *Worldidge* says, is Red-streaks and Golden-Rennets together. The Bartlet Queening mixed with Golden Pippins makes an excellent Cyder.

If you intend a mixture of Water in your Cyder, let it be done in the grinding, and it will better incorporate with the Cyder, than if put in afterwards.

Some Cyder will bear a mixture of Water without injury to its Preservation, others will not; therefore be not over hasty with too much at once, till you understand the Nature of the Fruit.

*How to make Water-Cyder.*

Boiled Water suffered to stand (till cooled) is best for this use, as being more defæcated. This small Beverage, or Cyderkin and Puree (as it is called) is made for the common drinking of Servants, &c. supplying the place of Small-beer, and to many more agreeable. It is made by putting the Mure into a Fat, adding what quantity of Water you please, namely, about half the quantity of pressed Cyder, or more; as you desire it stronger or smaller. Note, That the Water should stand 48 Hours on it before you press it; when 'tis pressed, Tun it up immediately, and it will be fit to drink in a few Days, by clarifying of it self. It is fortified by adding to it the Lees or Settling of better Cyder, putting it to the Pulp before Pressure, or by some superfluous Cyder which your Vessels could



not contain, or by grinding some fallen and refuse Apples.

Cyderkin will be made to keep long by being boiled after Pressure with such a proportion of Hops as is usually added to Beer; in which case, you need not to boil the Water before.

Some put in Ginger, *Jamaica* Pepper, and Bay Leaves, instead of Hops; which doth very well.

*Some Observations relating to Cyder.*

'Tis not good to grind or beat Apples in Stone Troughs, because it bruises the Kernel and Stalks, which give an ill savour to the Cyder.

Let not your Apples be ground too small, so as that too much of the Pulp may pass with the Liquor, it being good to strain it from the gross Particles of the Apples before you put it into the Fat.

*Fining of  
Cyder.*

Upon which account 'tis that the Juice of ripe pulpy Apples, as Pippins, Rennetings, &c. that are of a syrupy tenacious nature, do detain in them more of the dispersed Particles of the Fruit that by the Pressure comes out with the Liquor; which Particles, or flying Lee being part of the flesh or body of the Apple, is (equally with the Apple it self when bruised) subject to Putrefaction, by which means by degrees the Cyder becomes hard or acid; whereas the Redstreaks, Genet-moil, &c. that more easily part from their Liquor without the adhesion of so much of the Pulp, are not so subject to reiterated Fermentation, nor to Acidity, as the other sorts.

For Wine, Ale, Beer, and other Liquors, according as they tend more or less to Acidity, become clearer by the Precipitation of the gross Lees, which being subject (as I said before) to Putrefaction, according as the corrupt Particles are more or less in it, the Liquor becomes so much the sooner or later Vinegar.

As for instance, in Beer, which when 'tis designed for Vinegar is never fermented, nor the Fæces precipitated, as 'tis when preserved for drinking.

And



And therefore if you intend your Cyder shall retain its full strength, abstract it from the gross Parts, as I said before.

Also Cyder made of green immature Fruit will not fine kindly; and when it doth, it abides not long good, but suddenly becomes eager.

Generally the Cyder that is longest in Fining is the strongest and most lasting, especially if the Fruit hath been kept some time.

But Cyder, or any other Liquor, will be much longer in clearing in mild moist Weather, than cold dry Weather or Frost. And therefore, the best time to make Cyder is in cold Weather; Frost being apt something to check the fretting or overworking of it.

If your Cyder or other Liquor doth not fine, you may take of Water-Glue, or *Ifing-glass*, as 'tis commonly called, about the Proportion of three or four Ounces to a Hoghead; beat it thin on some Anvil, or Iron Wedge, and cut it in small pieces, laying of it in steep in White-wine (which will more easily dissolve it self than any other Liquor except Spirits) let it lie therein all Night, the next Day heat it some time over a gentle Fire till you find it well dissolved, then take a part of your Cyder, as about 1 Gallon to 20 Gallons, in which boil your dissolved Glue, and put it into the whole Mass of your Liquor, stirring of it well, and stopping of it close, so let it stand to ferment eight or ten Hours as you please; during which time the Glue being dispersed through the whole Mass of the Liquor, it will precipitate the Lee. When you observe it hath done working, you may draw it out gently at a Tap below the Scum, or you may first gently take off the Scum, as you please: Or you may do it thus; Steep your *Ifing-glass* in White-wine, enough to cover it; after 24 Hours beat the *Ifing-glass* to pieces, and add more Wine to it, and four times a Day squeeze it to a Jelly, and as it thickens add more Wine to it: When 'tis reduced to a perfect Jelly, take about a Pint or Quart to a Hoghead, and add it to three or four Gallons



lons of the Cyder you intend to fine, and mix well with the Jelly; putting of it into your Vessel of Cyder, stir it well with a Staff. This cold way is much better than the other; for boiling part of the Cyder makes it apt to decay the sooner.

This Liquor, thus gently purified, you may in a full Vessel preserve a long time, or draw it and bottle it in a few Days, there being no more Lee in it than is necessary for its Preservation.

If Cyder be fine, the sooner you draw it off the Lee the better, lest any change of Weather should alter it.

When your Cyder begins to look white on the top, draw it off into another Vessel, but not hastily; set your Tap so that it may drop out by degrees.

I am told that Figs put into Cyder improves it very much.

A Friend of mine had a Hogshead of Cyder that proved sour, and added some Water to it, and brewed it as you brew other Liquor, and it made (as he told me) excellent Drink.

*Casks for  
Cyder.*

A great occasion of spoiling of much Cyder, is the not having of good Casks for it, it being a Liquor very apt to attract any ill savour from the Vessel; and therefore new Casks very much affect the Cyder with an ill savour and deep colour: Wherefore if you cannot obtain Wine Casks, which are the best, scald your Casks with Water wherein a good quantity of Apple pumice hath been boil'd, before you put your Cyder into them.

Put not Cyder into a Vessel wherein Strong-beer, or Ale hath lately been, especially Strong-beer; for it gives a very rank unpleasant Taste to Cyder, so doth a Cyder-Vessel to Beer; therefore a Small-beer Vessel is to be preferr'd.

If your Vessel be tainted with any ill savour, boil an Ounce of Pepper in Water, enough to fill the Vessel; put it in scalding hot, and let it stand therein two or three Days.

Or take some quick Lime, and put into the Cask, which fleck with Water, keeping of it close stopp'd, tumble



tumble it up and down, till the Commotion cease and be sure your Cask be dry before you put your Cyder into it. But the most effectual Cure is to take them to pieces, and pare away the Film that is on the inside, and when air'd set them together again.

If your Vessel, before your Cyder is tun'd up into it, be fum'd with Sulphur, it much conduces to the <sup>Fuming a</sup> Cask, Preservation of this or any other sort of Liquor; which may be done by dipping of a Rag in melted Brimstone, and by a Wire letting of it down into the Cask, and fir'd so as to fill it full of Smoak: Upon which pour in your Liquor, which will give it no ill Taste, and is an excellent preserver of Health, as well as of the Liquor, and will much help to fine it. Or you may give your Cask a fine scent by taking of Brimstone four Ounces, of burnt Alum one Ounce, of Aqua Vitæ two Ounces, melt these together in an Earthen Pan, on hot Coals, and dip therein pieces of new Canvas, and instantly sprinkle thereon Powder of Nutmegs, Cloves, Coriander and Anniseeds: Set this Canvas on fire, and let it burn to fume the Vessel.

But the better way for this Operation is to have a little Earthen-pot to burn the Brimstone in, to the Cover of which have one Pipe to go into the Cask, and another to come into your Mouth, with which you may blow the Fume into the Cask.

After you have closed up your Bung, you ought to leave open a small Vent-hole, or but loosely put in the Peg, lest the Cyder break your Cask: In case the Liquor be unquiet, you may sometimes try the state of your Cyder by often opening of the Vent.

Cyder pressed from pulpy, or thorough-ripe, or mellow Fruit, having lain long in hoard, is not so apt to emit its Spirits as the other, and so is more easily preserv'd.

The upright Cask is most commended for Cyder, because 'tis apt to contract a Skin or Cream on the top, which helps much to its Preservation, and is in other Forms broken by the sinking of the Liquor; but  
in



in this 'tis kept whole, which occasions the briskness of the Drink to the last.

*To occasion  
Fermenta-  
tion.*

If Cyder do not work well, put a small quantity of Lime to it, and it will cause it to ferment, not only by reason of its warmth, but of the quick Salt that is in it: The Powder of calcined Flints, Alabaster, white Marble, Roch-alum, &c. is also good; but then the Cyder must be drank or bottled quickly.

The Shavings or Chips of Fir, Oak, or Beech, are great Promoters of Purification or Fermentation; and therefore a new Cask many times occasions Cyder to ferment too much.

Ginger accelerateth the Maturation of Cyder, and gives it more brisk Spirits, helpeth Fermentation, promoteth its Duration, and corrects its Windiness.

If Cyder hath any ill savour or taste from the Vessel, or any other cause, a little Mustard-seed (ground with some of the Cyder, and put to it) will help it.

*Restoring of  
Cyder.*

Deadness or Flatness in Cyder, which is often occasioned by the too free admission of Air into the Vessel, for want of right stopping, is remedied by grinding a small parcel of Apples, and putting of them into it, stopping of it up close, only you must sometimes open the Vent that it force not the Vessel; but then you must draw it off in a few Days, either into Bottles or another Vessel, lest the Murc corrupt the whole Mass; which may also be prevented in case you press your Apples, and only put in the Juice: The same may be done in Bottles, by adding about a Spoonful or two of new Must to each Bottle of dead Cyder, and stopping of it again. Cyder that is dead or flat will oftentimes revive again of it self, if close stopped, upon the Revolution of the Year, and approaching Summer.

But Cyder that hath acquired a Deadness or Flatness by being kept in a Beer or Ale Vessel, is not to be revived again.

Wheat unground, about a Gallon to a Hoghead, or Leaven or Mustard, ground with some part of the Cyder, or rather with Sack, and put into the Cask, is  
used



used either to preserve Cyder, or to recover it when acid; but the best Addition to preserve it, is a Decoction of Raisins of the Sun, or the new Lees of *Spanish Wine*.

Wheat boiled till it begin to break, and when cold put into the Cyder, but not in too great quantity, and stirred well, will help it much; the like doth Cinnamon: The Vessel must be kept close stopped.

But there is a difference between sharp or acid Cyder, and a Cyder that is eager or turned: The first hath its Spirits free and volatile, and may easily be retrieved by a small addition of new Spirits, or some edulcorating matter; but the latter hath some of its Spirits wasted and decayed, so that all Additions are but vain Attempts to recover it.

Thick Cyder may, by a second Fermentation, be made good and clear; but acid Cyder is rarely recovered, except it be in cold Weather; and then, tho' it be a little pricked, it will recover when warm Weather comes in.

Mustard beat with Sack, and put to boiled Cyder, preserves it, and gives it good Spirits.

Two or three Eggs put into a Hogshead of Cyder that is sharp, sometimes lenifies it; and two or three rotten Apples will sometimes clarify thick Cyder.

Wheaten-bran cast into a Cask after Fermentation thickens the Coat or Cream, and much conduces to its Preservation.

Bottling of Cyder is the only way to preserve it long, and it may be bottled two or three Days after 'tis well settled, and before it hath thoroughly fermented, if it be for present drinking; or you may bottle it in *March* following, which is the best time.

Bottles may be kept all Summer in cold Fountains, provided you pitch the Corks to prevent their rotting; or in Cellars, in Sand, if they are well corked: The longer they are kept the better, if the Cyder be good, and have a body.

After



After Cyder hath been bottled a Week (if 'tis new Cyder, else at the time of bottling) you may put into each Bottle a piece of white Sugar as big as a Nutmeg, this will make it brisk; but if your Cyder be to keep long, it will be apt to make it turn sour.

If your Bottles are in danger of the Frost, cover them with Straw; and about *April* put them into the coldest Repositories.

If your Bottles are musty, boil them in a Vessel of Water, putting of them in whilst the Water is cold to prevent their cracking; and then set them on Straw, and not on a cold Floor, when you take them out.

When your Cyder is thus bottled, if it were new at the bottling, and not absolutely fine, it is good to let the Bottles stand a while before you stop them close, or else open the Corks two or three Days after to give the Cyder Air, which will prevent the breaking of the Bottles against the next turning of the Wind into the South.

The meaner Cyder is more apt to break the Bottles than the richer, being of a more eager Nature, and the Spirits more apt to fly, having not so solid a Body to detain them as the rich Cyders; and observe, that when any of the Bottles break thro' the Fermentation of the Cyder, to open your Corks, and give them vent, and stop them up again a-while after, lest you lose many for want of this Caution.

Great care is to be had in choosing good Corks, much good Liquor being absolutely spoil'd through the only defect of the Cork; therefore some much commend Glass-stopples.

If the Corks are steep'd in scalding Water a-while before you use them, they will comply better with the Mouth of the Bottle than if forc'd in dry; also the moisture of the Cork doth much help it to keep in the Spirits.

Therefore the laying of your Bottles side-ways where your Liquor is very fine, so as that the raising of them may not disturb the settling, nor the Lee be-  
get



get any new Fermentation in them, is a great advantage to any Liquor.

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Chap. VI. *Of Perry.*

**T**HE next Liquor in esteem after Cyder, is Perry, the ordering of which being much the same with that of Cyder, I need not say much of it, only you must observe, not to let your Pears be over-ripe before you grind them, because of their Pulpiness, which makes them not easily to part with their Juice: And with some sorts of Pears, the mixing of a few Crabs in the grinding of them, in proportion to the sweetness of the Pear, is of great advantage to it, making some sorts of Perry equal to that of Red-streak Cyder.

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Chap. VII. *Of making other sorts of Wines or Drinks of Fruits.*

**B**ESIDES Cyder and Perry, there are many other <sup>Cherry-</sup> Drinks prepar'd out of our *British* Fruits, as of <sup>Wine.</sup> Cherries, &c. which are a Fruit as easily propagated as any, nor is there any Fruit that commonly bears better, nor that yields more Juice; which mix'd with the richest *Spanish* Wines, makes a very fine Drink, by the addition of some Sugars to it.

Or the Juice it self, press'd out and mix'd with a due quantity of Sugar and Water, makes a very rich Wine, that is very comfortable to the Stomach and Nerves.

The Plumb is also easily propagated; and no doubt but some of the more juicy sort of them, especially the <sup>Plumb.</sup> Damascen, would yield an excellent Liquor, but <sup>Wine.</sup> scarcely durable unless boiled with Sugar, and well purified, or else the Sugar boil'd before-hand in Water, and then added. The Juice of the Plumb being of a thick Substance, will easily bear Dilution; This is easily experimented where Plumbs are in great plenty.

The Red *Dutch* Currant, or *Corinth*, yields a very rich and well colour'd Juice, and a vinous Liquor, which

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which is to be diluted with an equal quantity of Water boiled with refined Sugar, about the proportion of one pound to a Gallon of your Wine (when mixed with the Water); and after the Water and Sugar so boiled together is cold, then mix it with the Juice of the Currants, and purify it with Ising-glass dissolved in part of the same Liquor, or in White Wine, as is before directed for the purifying of Cyder, after the rate of an ounce to eight or ten Gallons, but boil it not in a Brass Vessel for the Reasons beforementioned: This will raise a great Scum on it of a great thickness, and leave your Wine indifferent clear, which you may draw out either at a Tap, or by your Siphon into a Barrel, where it will finish its Fermentation, and in three Weeks or a Month become so pure and limpid, that you may bottle it with a piece of Loaf-Sugar in each Bottle in bigness according to your Discretion, which will not only abate its quick Acidity, that it may as yet retain, but make it brisk and lively.

At the time you bottle it, and for some time after, it will taste a little Sweet-sour, from the Sugar and from the Currant; but after it hath stood in the Bottles six or eight Weeks, it will be so well united, that it will be a delicate, palatable, rich Wine, transparent as the Ruby, of a full Body, and in a Refrigeratory very durable; and the longer you keep it, the more vinous will your Liquor be.

Let your Currants hang on the Trees until they are thorough ripe, which is long after they are become red, to digest and mature their Juice, that it need not that large addition of Sugar that otherwise it would do in case the Fruit had been gathered when they first seemed to be ripe, as is vulgarly used, and the common Receipts direct: Also it makes the Liquor more Spirituous and Vinous, and more capable of Duration than otherwise it would be if the Fruit had not received so great a share of the Sun.

The Gooseberry Tree, being one of the greatest Fruit-bearing Shrub, yields a pleasant Fruit; which  
 † although



although somewhat luscious, yet by reason of its gross Lee, whereof it is full, it is apt to become acid, unless a proportion of Water sweetned with Sugar (but not with so much as the other acid Liquors) be added unto it. This Liquor, of any other, will not bear a Decoction, because it will debase its Colour, and make it brown.

There is no Shrub yields a more pleasant Fruit than the Raspberry Tree, which is rather a Weed than a Tree, never living two Years together above-ground. Nor is there any Fruit yields a sweeter and more pleasant Juice than this, which being extracted, serves not only to add a Flavour to most other Wines or Liquors, by a small addition of Water and Sugar boiled together, and when cold added to this Juice, and purified, makes one of the most pleasant Drinks in the World. The same way Apricot, and the Wines of other Fruits may be made.

Having given you a taste of most Wines made by pressure of the Juices out of the Fruits, you may also divert your self with the Blood of Grapes, or any other of the before-mentioned limpid Liquors tinged with the spirituous Flavour of other Fruits, that cannot so easily and liberally afford you their Juices; as, of the Apricot, which steeped in Wine gives the very taste of the Fruit; also Clove-gilliflowers, or sweet-scented Flowers do the like. You may also make Experiment of some sort of Peaches, Nectarines, &c. what Effect they will have upon those sorts of Drinks.

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*Chap. VIII. Of the making of some other Drinks or Wines, usually drank in this Island.*

**T**HERE are several other pleasant, wholesome, and necessary Drinks made of Trees, Leaves, Grains, and other things, besides such Drinks or Liquors as are commonly made of the Fruits of Trees or Shrubs.



As Mead, or Hydromel, that is prepared out of Honey, being one of the most pleasant and universal Drinks the Northern part of *Europe* affords; and one of the most ancient Drinks of the Northern parts. Honey being to be had from the Southerly parts of *Spain* and *Italy*, &c. to the Artick Circle or Frozen Zone.

Those that lived formerly in the more Southern parts (as *Pliny* reports) made a drink compounded of Honey and tart Wine, which they termed Melitites, by the addition of a Gallon of Honey to five Gallons of their Wine: 'Tis also an excellent Ingredient mixed with Cyder.

In *Swedeland*, *Muscovia*, and as far as the *Caspian* Sea, they make great Account of this Drink; to which Liquor they give a great advantage by the addition of the Juice of Raspberries, Strawberries, Mulberries, and Cherries.

They also steep Raspberries in *Aqua vitæ*, twenty-four Hours, and add to it their Hydromel, which is a great Amendment of it.

There are very great variety of Receipts for the making of Metheglin or Hydromel; but the best that I have met with, is to

Take twelve Gallons of Water, and put in the Whites of six Eggs, mix them well with the Water, and twenty Pounds of Honey; boil it an Hour, and when boiled add Cinnamon, Ginger, Mace, Cloves, and a little Rosemary, and when 'tis cold put a spoonful of Yeast to it, and Tun it up, keeping of it filled up as it works; when it hath done working, stop it up close, and when fine, bottle it.

But the finest Mead is that made of what they call Live Honey, which is what naturally runs from the Combs (but that from swarms of the same Year is the best) and add so much Honey to clear Spring-water, as that when the Honey is dissolved thoroughly, an Egg will not sink to the bottom, but easily swim up and down in it. Boil this Liquor in a Copper Vessel for  
I about



about an Hour or more; and by that time the Egg will swim above the Liquor about the breadth of a Groat, then let it cool; the next Morning you may barrel it up, adding to the Proportion of fifteen Gallons an Ounce of Ginger, half an Ounce of Cinnamon, Cloves and Mace of each an Ounce, all grossly beaten, for if you beat them fine they will always float in your Mead, and make it foul; and if you put them in whilst it is hot, the Species will lose their Spirits. You may also add a Spoonful of Yeast at the Bung-hole to increase its Fermentation; but let it not stand too cold at first, that being a principal Impediment to its Fermentation; as soon as it hath done working, stop it up close, and after a Month bottle it; and the longer 'tis kept, the better it will be.

By the floating of the Egg you may judge of its Strength, and you may make it more or less strong as you please, by adding of more Honey, or more Water; and by long boiling of it, it is made more pleasant and durable.

The Sycamore and Walnut-Tree are said to yield an excellent Juice; but that which we have the most Experience of, is the Birch-Tree.

The Juice of which may be extracted in very great Quantities; where those Trees are plenty, many Gallons in a Day may be gathered from the Boughs of the Trees by cutting them off, leaving their Ends fit to go into the Mouths of a Bottle, and so by hanging many Bottles on several Boughs, the Liquor will distil into them very plentifully.

The Season for this Work is from the end of *February* to the end of *March*, whilst the Sap rises, and before the Leaves shoot out from the Tree; for when the Sap is forward, and the Leaves begin to appear, the Juice by a long Digestion in the Branch grows thick and coloured, which before was thin and limpid: The Sap also distils not in cold Weather whilst the North and East Winds blow, nor in the Night-time, but very well and freely, when



the South or West Winds blow, or the Sun shines warm.

That Liquor is best that proceeds from the Branches, having had a longer time in the Tree, and thereby better digested, and acquiring more of its Flavour than if it had been extracted from the Trunk.

When you draw out the Sap of Trees for any use, and desire to have a quantity, what you gather first put into Glasses, or other fit Vessels, and set it in the Sun 'till the rest be ready, and put into it a hard Toast of Rye-bread cut thin, and it will cause it to ferment; when it works take out the Bread, and bottle the Liquor.

In Birch Trees the Sap rises out of the least Twigs or Fibres of the Roots, but from Branches and Roots that bend downwards will issue more Sap than from those that are erect, and a Branch cut quite off will yield Sap.

Thus many Hogsheads may soon be obtained. Poor People (where Trees are plenty) will draw it for two or three Pence the Gallon; to every Gallon whereof add a pound of refined Sugar, and boil it about a quarter, or half an Hour, then set it to cool, and add a very little Yeast to it, and it will ferment, and thereby purge it self from that little Dross that is in the Sugar and Liquor. Put it into a Barrel, and add thereto a small proportion of Cinnamon and Mace bruised, about half an ounce of both to ten Gallons, stop it very close, and about a Month after bottle it. Its Spirits are so volatile, that they are apt to break the Bottles unless placed in a cool place, without which Conveniency it will not keep long.

Instead of every pound of Sugar, if you add a quart of Honey, and boil it as before, and adding Spice to it, and fermenting of it as you do Mead, it makes an admirable Drink, both pleasant and medicinal.

Ale also brewed of this Juice or Sap, is esteemed very wholesome.



Mum being become a common Drink, and being very wholesome, and what may be made of our own Product, I should hope it might be made a home Commodity instead of a Foreign: And therefore, for the Encouragement of it, I shall give you the Receipt, as recorded in the Town-house in *Brunswick*; which is thus:

Take sixty-three Gallons of Water that hath been boiled to the Consumption of a third part, brew it according to Art, with seven Bushels of Wheat Malt, one Bushel of Oatmeal, one Bushel of ground Beans; and when 'tis Tunned, let not the Hoghead be too full at first; and when it begins to work, put into it of the inner Rind of Fir three Pounds, tops of Fir and Birch one pound, *Carduus Benedictus* three handfuls; Flowers of Rosa solis a handful or two, Burnet, Betony, Marjoram, Avens, Penny-royal, Wild-thyme, of each a handful and a half, of Elder Flowers two handfuls or more, Seeds of Cardamom bruised three ounces, Barberries bruised one ounce. Put the Herbs and Seeds into the Vessel when the Liquor hath wrought a while; and after they are added, let the Liquor work over the Vessel as little as may be. Fill it up at last, and when 'tis stopped, put into the Hoghead ten new-laid Eggs, unbroken or cracked; stop it up close, and drink it at two Years end.

But our *English* Brewers use Cardamom, Ginger, and Sassafras, which serves instead of the inner Rind of Fir, also Walnut-Rinds, Madder, Red Sanders, and Enula Campana; and some make it of Strong-Beer, and Spruce-Beer; and where 'tis designed mostly for its Physical Virtues, some add Water-crelles, Brook-lime, and Wild-parsley, with six handfuls of Horse-radish rasped to every Hoghead, according to what their Inclinations and Fancy most lead them.



Note, That  
the Rising  
and Set-  
ting of the  
Sun, and  
Length of  
the Days,  
is compu-  
ted from  
the first  
of every  
Month,  
Lond.  
Lat.

**I**F this Month prove cold, 'tis seasonable to kill the Vermin and Weeds, and to mellow the Ground: And is the chief time to plow up Lays, to fallow the Ground you intend for Pease, to water Meadows and Pastures, to drain Arable Grounds where you intend to sow Pease, Beans, Oats, or Barley, to lay Dung on heaps to carry on the Land in frosty Weather, to make Hedges, Ditches, to cut Ant-hills, and to fill up the Holes in Meadows and Pasture-ground, to gather Stones, &c.

Rear Calves, Pigs, &c. have especial Care of Ewes and Lambs; House Calves; geld young Cattle soon after they are fallen; feed Doves; repair Dove-coats.

Plant Timber Trees, Coppice-wood, or Hedge-wood, and also Quick-sets; cut Coppices and Hedge-rows, lop and prune greater Trees.

Work to be done in the Orchard and Kitchen Garden.

Trees.

Prune Vines and forward Fruit Trees: If the Weather be open and mild, dig and trench Gardens or other Ground for Pease, Beans, &c. Against the Spring dig Borders; prepare your Soil or Manure, and suffer no Weeds to grow on them: Uncover Roots of Trees where need is, and add such Manure to them as they require, not laying of it too near the Roots: You may also, if the Weather prove mild, set Beans and Pease: As yet, Roses may be cut and removed.

Grafts.

Gather Pears, Cherries, and Plumb Cions for Grafts about the latter end of this Month, before the Bud sprouts, which stick in the Ground for some time, because they will take the better for being kept a small time from the Tree; and graft them the beginning of the next Month. Cleanse Trees of Moss, the Weather being moist.

Make hot Beds, and sow therein your choice Sallets, as Chervil, Lettice, Radish, &c. Sow early Celliflowers: Secure your choice Plants and Flowers from the Injuries of the Weather by Covers, Straw, or Dung. Earth up the Roots of such Plants as the Frost hath uncovered.

Set Traps to destroy Vermin where you sow or have such Plants or Seeds as they will injure. Take Fowls; destroy Sparrows in Barns, and near them kill Bull-finches, &c.

and



and in wet or hard Weather clean, mend, sharpen, and prepare your Garden-tools.

Dig up weedy Hop Gardens.

Hops.

Turn up your Bee-hives, and sprinkle them with warm Apiary. and sweet Wort. Also you may remove Bees.

Fruits in prime, and yet lasting.

Kentish, Russet, Golden, and French Pippins, Kirton Apples. Pippins, and Holland Pippins, John Apples, Winter Queenings, Marigold, Harvy Apple, Pome-water, Golden Doucet, Renneting, Love's Pearmain, Winter Pearmain, &c.

Winter Musk (bakes well,) Winter Norwich (excellent Pears. baked,) Winter Burgamot, Winter Bon Chrestien, both Mural, the great Surrein, &c.

*In the Flower Garden.*

If the Weather in this Month prove cold, great Care must be taken of your Flowers; especially such as least endure the Cold, or that are in danger of being washed out of the Ground, or overchilled with extream Frosts. Likewise Earth up your Flowers with fresh Mould. Plant Anemony Roots and Ranunculus's, which will be secure without covering: Except such as you sowed in October or November for earlier Flowers, which should be secured both from Frosts and Rains, and about the end of the Month put Mould about the Roots of your Auricula's that have been uncovered by Frost.

If the Weather be extream you must be careful of your tenderest Plants, and mind to tend your Fire in your Conservatory or Green-house, so as to keep them in a moderate Heat (too sudden, or too much Heat or Cold being apt to spoil most of your Plants) and to keep the Windows and Doors well closed and lined with Mats, &c. to keep the Air out of the Cracks, especially where the Orange Trees are.

*Flowers in prime, or yet lasting.*

The Præcoce Tulip, Winter Aconite, some sorts of Anemonies, Black Hellebore, Winter Cyclamen, Oriental Jacinths, Brumal Hyacinth, Levantine Narcissus, Laurustinus, Mezereon, Primroses, &c.

Note, That these Flowers are more forward or backward according to the Soil, and the Situation of the Place they grow in. This



**T**HIS is a principal Seed Month, for such as they commonly call Lenten Grain, and is usually subject to much Rain or Snow, which is not unseasonable.

Now sow all sorts of Grey Pease, Fitches, Beans, and black Oats; carry out Dung, and spread it before the Plough, and also on Pasture Ground; this being the principal Month for that purpose.

This is the best time to plant Trees and Quick, as also to plash it; to set Willows, Plants, or Pitchers, and also Poplars, Osiers, and other Aquaticks; and to shroud or lop Trees, or cut Coppices.

Sow Mustard Seed, and Hemp Seed, if the Spring prove mild: Feed your Swans, and make their Nests where the Floods cannot reach them.

Soil Meadows that you cannot overflow or water, catch Moles, and cut Mole-hills, and take great care of Ewes and Lambs where they are forward.

Work to be done in the Orchard and Kitchen-Garden.

Prune, trim, and nail up Fruit Trees, and cleanse them from Moss and Cankers: Now is a good time to graft the more forward sort of Fruit, if the Weather be temperate.

Do not prune your tender Wall Fruit till you think the hard Frosts over, tho' it ought to be done before the Buds and Bearers grow turgid, and mind to spread your Wall Trees well at the bottom.

Plant Vines, or any sort of Fruit Trees in open Weather; trim up your Pallisado Hedges and Espaliers; set Kernels, Nuts or Stones of Fruits, and sow other hard Seeds.

Lay Branches to take Root, or place Baskets, &c. of Earth for the Branches to pass through. Graft in the Cleft, and so continue to the latter end of the next Month.

Sow Annise, Beans, Pease, Radish, Parsnips, Carrots, Potatoes, Onions, Parsly, Spinage, Corn Salletting, and other hardy Herbs or Seeds, and plant Cabbage Plants and Colliflowers in warm places; also Liquorice, and sow Asparagus if the Spring be mild. Now the Bull-finches do the most hurt to Fruit Trees. This is the best time to raise any thing that will grow of Slips.

Make



Sun {rises 7<sup>h</sup> 13<sup>m</sup>} ☿ {hath days} Long. 9<sup>h</sup> 24<sup>m</sup> 361  
 {sets 4 45} FEBR. {XXVIII.}

*Make Hot-beds for Melons, Cucumbers, &c. continue Vermin Traps, and pick up all the Snails you can find, destroying the Frogs and their Spawn.*

*This is a good time to sew Fish ponds, and to take Fish, most Fish being now in Season.*

*You may, if the Weather prove mild, plant Hops, Hops. and dress them that are out of Heart. And also dig up your Hop Ground, if 'tis weedy.*

*Half open the Passage for Bees, and now you may remove them, but continue to feed weak Stocks.*

Fruits in prime, or yet lasting.

*Kentish, Kirton, Russet, Holland Pippins, Deuxans, Apples. Winter Queening, Harvey, sometimes Pome water, Pomeroy, Golden Doucet, Renneting, Love's Pearmain, Winter Pearmain, &c.*

*Bon Chrestien of Winter, Winter Poppering, Little Pears. Dagobert.*

*In the Flower Garden.*

*If the Weather is seasonable, Air your housed Carnations in warm Days, and mild Showers, but set them in again towards Night; and so you may do by other Flowers that are not too tender: Sow Alternus Seeds, Lark Spurs, &c.*

*Flowers in prime, or yet lasting.*

*Some Anemonies, Winter Aconite, Hyacinthus Stellatus Præcoce Tulip, Persian Iris, Leucoium bulbosum, Dens caninus, Black Hellebore, Vernal Crocus, Single Hepatica, Vernal Cyclamen Red and White, early Daffadils, the great white Arnithogals, Mezercon, large leaved yellow Violets, &c.*

*If*



**I**F this Month prove cold 'tis seasonable to check the pregnant Buds till a more safe Season; and if it prove dry, the Country-man esteems it to presage a happy born Year. You may yet prune or plant Trees, tho' tis of the latest of all sorts, except Winter-Greens.

Let Cattle feed no longer on Meadows that you intend to mow; have especial regard to the Fences both of Meadow, Corn and Woods, and take care of Ewes and Lambs.

About the end of this Month you may begin to sow Barley, earlier in Clay than Sand; you may roll Wheat if the Weather prove dry; make an end of sowing of all sorts of Pulse. You may now shroud or lop old Trees, and fell Coppice-wood before the warm part of the Month come in.

This is the only time to raise the best Poultry.

It is now a good time to set Osiers, Willows and other Aquaticks; sow the Rye, called March-Rye and Oats, and plant Saffron, Woad, Weld, Madder and Liquorice.

In this Month and the next sow all sorts of French Grasses or new Hayes, as Clover, S. Foyn, &c. also now sow Hemp, and Flax, if the Weather be temperate.

This is the principal Month in the Year for the Destruction of Moles.

Work to be done in the Orchard and Kitchen Garden.

This is the chief Month for grafting, beginning with Pears, and ending with Apples; only if the Spring proves forward, be the earlier. Prune last Year's Grafts, and cut off the Heads of your budded Stocks. Now cover the Roots of all such Trees as you laid bare the preceding Winter, and remove such young Trees as you omitted before, if the Bud is not too forward.

Plant Peaches and Nectarines, but cut not off the Tap-root as you do of other Trees, because it will prejudice them.

Carry Dung into your Orchards, Gardens, &c. turn your Fruit in the Room where it lies, but open not yet your Windows. Smoak your Orchards.



Top your Rose trees near a Leaf-bud, and prune off the dead and wither'd Branches, keeping of them to a single Stem. Slip and set Sage, Rosemary, Thyme, Lavender, &c.

You may now transplant most sorts of Garden-herbs, Sweet-herbs, and Summer Flowers. Now is the best time to make Hot-beds for Cucumbers, Melons, &c.

Now sow Alisander, Basil, Beets, Borrage, Bugloss, Cabbage, Carrots, Chervil, Cresses, Endive, Fennil, Garlick, Leeks, Lettice, Marigolds, Marjoram, Onions, Orach, Parsnips, Parsley, Pease, Purslain, Radish, Sallery, Smallage, Spinage, Skirrets, Succory, Turneps, Tobacco, &c. and Samphire to replant in May, which will grow well of French Seed.

About the middle of this Month dress and string Strawberries, uncover Asparagus Beds, and dig about them. You may also now transplant Asparagus Roots to make new Beds. Slip and plant Artichoaks and Liquorice.

Stake and bind up weak Plants against the Wind: Sow Pinks, Carnations, &c. In this Month sow Pine-kernels, and the Seeds of all Winter-greens.

Plant all Garden-herbs and Flowers that have fibrous Roots. Sow choice Flowers, that are not natural for our Clime in hot Beds this Month.

You may now plant Hops: This is a very seasonable time to dress them. Now the Bees sit, keep them close Night and Morning: If the Weather prove ill, you may yet remove Bees.

Fruits in prime, or yet lasting.

Golden Ducket (Doucet,) Pippins, Rennetings, Love's Pearmain, Winter Pearmain, John Apples, &c.

Later Bon Chrestien, Double-blossom, Pear, &c.



## M A R C H.

### *In the Flower-Garden.*

**S**Take and Bind up your Weak Plants and Flowers, Plant Box, Sow Pinks, Sweet-Williams, Carnations, Pine Kernels, Firz-Seed, Bayes, Alaternus, Phillyrea, and most Perennial Greens, &c. or you may stay somewhat later. Sow Auricula-Seeds in Pots or Cases in good Earth somewhat Loamy.

Plant some Anemony Roots to bear late and successively, and if the Season be dry, Water them once in two or three Days. Transplant Ranunculus's and Fibrous rooted Flowers, as Primroses, Hepatica's, Auricula's, Camomil, Hyacinth, Tuberoſe, Matricaria, Gentianella, Hellebore, and other Summer Flowers; set Leucoium; slip Wall-Flowers, Lupines, Convolvulus's, Spanish ordinary Jessamine, and prune Pine and Fir Trees, &c.

Towards the Middle or latter end of *March*, sow on your Hot-beds such Plants as are late bearing in our Climate; as Balsamine, and Balsamum mas, Pomum Amoris, Datura, Æthiopic Apples, some choice Amaranthus's, Dactyls, Geraniums, Hedysarum Clypeatum, humble and sensitive Plants, Lentiscus, Myrtle Berries, Capſicum, Indicum, Cana Indica, Flos Africanus, Mirabile Peruvian, Nasturtium Ind. Indian Phaseoli volubilis, Myrrh, Carobs, Marococ, &c.

About the end of this Month carry into the Shade such Auricula Seedlings or Plants, as are for their choiceness preserv'd in Pots. Transplant Carnation Seedlings, Earth up your Layers, cut off the infected Leaves.

Cover your choice Tulips, and take the like care of your best Anemonies, Chamæ Iris, Auricula's, early Cyclamen, Brumal Jacinth, &c. Cover with Straw or Pease-Haum your Seedlings of Fir, Pine, Phillyrea, Bayes,



Sun { rises 6<sup>h</sup> 19<sup>m</sup> }  $\Upsilon$  { hath days } Long. 11<sup>h</sup> 22<sup>m</sup> 365  
 { sets 5 41 } MARCH { XXXI. }

Bayes, Cyprus, and all other Winter Greens, till they have passed two or three Years in the Nursery, and are fit to be transplanted; which Rules should be observed in all extream Weathers during the Winter, minding to uncover them in good Weather, and in sharp Winds neither sow nor transplant. Sow Stock-Gilliflower Seeds in the full of the Moon.

You may now towards the end of the Month, set Oranges, Limons, Myrtles, Oleanders, Dates, Lentiscs, Aloes, Amomums, and other tender Trees and Plants in the Portico, and open the Windows and Doors of your Conservatory or Green-house, to acquaint 'em gradually with the Air, but trust not too confidently to the Night. Now also is the Season to raise Stocks, to bud the Orange and Limons on, and to transplant some of the hardiest Ever-Greens, especially if the Weather be moist and temperate.

*Flowers in prime and yet lasting.*

Anemonies, Winter Aconite, Auricula's, Arbor Judæ, Brumal Crocus of all Colours, Chelidonium, Crown Imperial, Spring Cyclamen, Dens Caninus, Fritillaria, Grape-Flower, Black and White Hellebore, single and double Hepatica, Hermodactyls, Hyacinth, Persian Iris, Chamæ Iris, Tuberous Iris, Junquils, Spanish Junquils, Leucoion, Dutch Mezereon, Narcissus, Ornithogalum max. Primroses, Rubus odoratus, Præcoce Tulips, Violets, Dutch Yellow Violets, Zebion, &c.

*A Dry*



**A** Dry Season in this Month is best to sow Barley and White Oats in, to prevent Weeds; and likewise to fallow in.

Fell the Timber you intend to bark, if the Spring be forward: Cleanse and rid your Coppices, and preserve them from Cattle: Keep Geese and Swine out of Commons and Pastures, and water new-planted Trees, if the Weather prove dry.

Pick up Stones in the new-sown Land: Sow Hemp and Flax.  
Cleanse Ditches, and get in your Manure that lies in Streets  
or Lanes, or lay it on heaps.

Set Osiers, Willows, and other Aquaticks, before they are too forward.

You may throughout this Month sow Clover-grass, St. Foy, and all French and other Grasses or Hays; and plant Madder, and be selling of your Winter-fed Cattle.

Work to be done in the *Orchard* and *Kitchen Garden*.

You may yet graft some sorts of Fruit in the Stock the beginning of this Month.

Now sow all sorts of Garden-seeds in dry Weather, and plant all sorts of Garden-herbs in wet Weather.

Plant Cucumbers, Melons, Artichoaks, and Madder; and sow such tender Seeds as could not abide the harder Frost. Set French Beans, gather up Worms and Snails after Evening-showers, and early in the Morning.

Sow Turneps, to have them early, and your annual Flowers that come of Seeds, that you may have Flowers all the Summer; and transplant such Flowers with fibrous Roots as you left unremoved in March. Sow also the Seeds of Winter-greens. Now is the time to plant Strawberries.

Now bring forth your tender Plants you preserv'd in your Conservatory, except the Orange-tree, which may remain till May.

*Smock your Orchard with Straw towards the Evening.*

Transplant and remove your tender Shrubs, as Jessamines, Myrtles, Oleanders, &c. Towards the end of this Month, also in mild Weather, clip Phillyrea and other tonsil Shrubs, and transplant any sort of Winter-greens.

Hop gar-      *Plant Hops, and Pole them the beginning of April, and bind*  
den            *them to the Poles.*

Apiary. *Open the Doors of the Bee-hives, for now they hatch, that they may reap the benefit of the flowry Spring, and be careful of them.*

Fruits in prime, or yet lasting.

Apples. *Pippins, Deuxans, Westberry Apple, Russeting, Gilliflow-*  
*er, Flat-Rennet, &c.*

Pears. *Later Bon chrestien, Oak-Pear, Double Blossom, &c.*

About the beginning of this Month sow sweet Marjorum, Hyssop, Thyme, Scurvy-grass, Basil, Winter Savory and tender



Sun } rules 5<sup>h</sup> 18<sup>m</sup> } ☽ { hath days } Long. 13<sup>h</sup> 23<sup>m</sup> 367  
 } sets 6 42 } APRIL XXX.

der Plants; sow also Purslain, Colliflowers, Lettice, Radish, Carrots; plant Artichoak Slips, sow Turneps; set French Beans; slip Lavender, Sage, Pennyroyal, Rosemary, Lavender, &c.

### *In the Flower Garden.*

Sow Divers Annuals to have Flowers all Summer, as Belvider, Digitalis, Delphinium, Cyanus of all sorts, Columbines which renew every four or five Years, Candy Tufts, Marigolds, Muscipula, Medica, Hollyhocs, Garden Pansey, Scabious, Scorpoides, Tufts, &c.

Transplant such Fibrous Roots as were not done last Month, as Violets, Hepatica, Primroses, Hellebore, Matricaria, &c. Sow Pinks, Carnations, and trim off the dead rotten Leaves and old Roots. Sow Sweet Williams, &c. After Rain place Auricula Seedlings in the Shade. Sow Leucoium, remove it often, and replant it in moist Weather the Spring following. Set Lupines, &c.

Sow also Pine Kernels, Fir Seed, Phillyrea, Alaternus, and most perennial Greens. Vide Sept.

Take out your Tuberose, parting the off Setts, and plant them in natural Earth, under which is a Layer of rich Mould. Set your Pots in a Hot-bed temperately Warm, and give them no Water till they Spring, and then set them under a South Wall in dry Weather; Water them freely. You may treat the Narcissus of Japan or Guernsey Lily, and the Luca after the same manner, only mix a little Sea Sand with the Earth you plant them in near the Surface.

Set out your Flos Cardinalis; slip and set Marums, Water Anemonies, Ranunculus's, &c.

Towards the end of this Month transplant your tender Shrubs, as Spanish Jasmines, Myrtles, Oleanders, Young Oranges, Cyclamen, Pomegrante, &c. but first let them begin to Sprout.

At this time, (if the cold Winds are past) after Showers clip Phillyrea, Alaternus, Cyprus, Box, Myrtle, Barba Jovis, &c.

Now is the Season to bring out in a fair Day, your choice and tender Shrubs, such as you durst not adventure out in March, only Orange Trees you may keep in till next Month to prevent Danger. You may now graft by approach your tender Shrubs, as Oranges, Limons, Pomegrantes, Jasmines, &c.

### *Flowers in prime, or yet lasting.*

Anemonies, Auricula urfi, Almonds, Arbor Judæ, Acanthus, Bell Flowers, Chamæ Iris, Crown Imperial, Caprifolium, Cyclamen, Cowslips, Caltha Palustris, Cochlearia, Dens Caninus, Double Daisies, Fritillaria, Florence Iris, Gentanella, Geranium, Musk-grape-Flower, Hypericum Frutex, Hepatica's, Starry Jacinth, Persian Jasmine, Double Junquils, Persian Lillies, Ladies-Smock, Lucoium, Lilacks, Narcissus, Muscaria reversed, Primrose, Pulsatilla, Parietaria, Peonies, Persian Jasmine, Parietaria Lutea, Rosemary, Ranunculus's, Radix Cava, Tulips, &c.



**I**F this Month proves dry, it gives great hopes of a full Barn; and if cold, 'tis an Omen of good Health. The pleasure of Angling is now in its Splendor, especially for the Trout and Salmon.

Now wean those Lambs you intend to have the Milk of their Ewes: Forbear cutting or cropping of Trees you intend shall thrive till October: Kill Ivy.

If your Barley be too rank, now you may mow it, or feed it with Sheep or Hogs, before it be too forward: Weed Corn. In some places Barley may be sown in this Month. Begin to fold Sheep, and put your Mares to the Horses.

Now sow Buck-wheat or Brank: Sow Latter Pease: Also Hemp and Flax may be sown: Put fattening Cattle and milch Cows into fresh Pasture, and let nothing be wanting in the Dairy.

Weed Quicksets, drain Fenns and wet Grounds, twi-fallow your Land, carry your Soil or Compost, gather Stones from the Fallows, turn out the Calves to Grass, over-charge not your Pastures, lest the Summer prove dry, get home your Fuel, begin to burn beat your Land, and stub or root up Goss, Furze, Broom, Bushes, &c. that you intend shall not grow again.

Sell off your Winter-fed Cattle: About the end of this Month mow Clover-grass, St. Foyn, and other French Grasses. Now leave off watering your Meadows, lest you gravel or rot your Grass.

Look well after your Sheep if this Month prove rainy lest the Rot surprize them.

Work to be done in the Orchard and Kitchen-Garden.

Plant all sorts of Winter-greens, and sow the more tender Seeds, as Sweet-marjorum, Basil Thyme, and hot aromattick Herbs and Plants: Set Sage and Rosemary.

Smoak your Orchard as before, thin your Salletting and other Herbs, that what you leave may thrive the better.

Cover no longer your Cucumbers, Melons, &c. excepting with Glasses: Sow Purslain, Lettice, &c. and distil Plants for Water Spirits, &c.

At the end of this Month take up such Tulips as are dried in the Stalk.



Sun { rises 4<sup>h</sup> 25<sup>m</sup> } II { hath days } Long. 15<sup>h</sup> 9<sup>m</sup> 369  
 { sets 7 35 } MAY { XXXI. }

*Bind Hops to their Poles, and make up the Hills after Rain.*

*Now set your Bees at full liberty, and expect a Swarm.*

*Fruits in prime, and yet lasting.*

*Pippins, Deuxans, or John Apple, Westberry Apples, Russetting Apples, Gilliflower Apples, the Maligar, &c. Codling.*

*Great Kairville, Winter Bon-Chrestien, Black Pear of Worcester, Sur-Pears, rein, Double-blossom Pear, &c.*

*The May Cherry, Strawberries, &c.*

*Cherries,  
&c.*

*In the Flower Garden.*

Be careful to keep under the Weeds; spread and bind down the Branches of Arbors, and clip your Hedges and Trees. Shade your Carnations and Gilliflowers, and plant Stock Gilliflowers in Beds; continue watering Ranunculus's, and plant forth your Amaranthus's.

You may now bring the Orange Tree out of the Conservatory when you see the Mulberry Tree put forth; and also transplant and remove them. Let your Cases be filled with natural Earth taken up half a Spit deep, under the Tuft of the best Pasture-Ground that has been Fothered on; mix it with rotten Cow-dung, or very mellow Soil screened and prepared sometime before. If this be too stiff sift a little Lime amongst it, and put a few rotten Willow Sticks; cut the two biggest Roots a little, especially at the bottom, and set your Plants not too deep. At the bottom of the Case lay some Brush Wood to give a free Passage to the Water, that it may not rot the Fibres. Set them in the Shade a Fortnight; and then bring them into the Sun by degrees; water them with Water in which Sheeps Dung is dissolved by stirring of it, and setting it in the Sun some Days before you use it; but do not drench them too much at first, and do not let it touch the Stem. If you cut off any Branch make a Searcloth of Rosin, Turpentine, Bees Wax and Tallow, and put it on the Wound till it is healed.

Now give fresh Earth that is rich to all your housed Plants, laying of it on the Surface about four Inches deep, loosening the Earth with a Fork. Brush and cleanse them from Dust.

*Flowers in prime, or yet lasting.*

Late set Anemonies, Anpodophyton, Augustifol, Asphodel, Antirrhinum; Blattaria, Bulbous Iris, Bellis double white and red, Bee Flowers, Bugloss, Barba Jovis; Chamæ Iris, Cyanus, Cytisus Maranthe, Cyclamen, Columbines, Caltha Palustris, double Cotyledon, Cinnamon, Centifol, Cherrybay, Cowslips, Chalcedons, Crowfoot, Campanula's; Digitalis Deptford Pinks; Fraxinella; Gladiolus, Geranium, Guelder Rose; Helleborine, Horminum Creticum, Hesperis, Honey Suckles; Jacea; Lychnis, Yellow Lilies, Lilium Convallium, Ladies Slipper, Persian Lily, Leucoium, Laurus; Millefolium Luteum, Red Martagon, Homer's Moly; Sea Narcissus; Oleaster, Oxyacanthus, Orchis; Phalangium Pink, Pansies, Prunella, Peonies; Ranunculus, Roses, Rosemary; Syringas, Sedum, Stock Gilliflowers, Starflowers, Sisymbrium, Sambucus, Stæchas, Satyrion; Tulips, Trachelium, Thalictrum, Tamariscus; Valerian, Veronica, Musk Violets, &c.



**A** Shower at this time of the Year is welcome, and if the Weather be calm it makes the Farmer smile on his hopeful Crops.

This Month is the prime Season for the Washing and Shearing of Sheep; in forward Meadows mow Grass for Hay.

Cast Mud out of Ditches, Pools, Rivers: This is the best time to raise Swine for Breeders.

Two-fallow your Land in hot dry Weather, it kills the Weeds, and sweetens the Land, one plowing then being worth three or four in rainy Weather.

Carry Marl, Lime and Manure of what kind soever to your Land, bring home your Coals, and other necessary Fuel fetched far off, before the Teams are busie at Harvest.

You may continue to weed Corn, the beginning of this Month, but not longer; sow Rape and Coal-seed, and also Turnep-seed. Now Mill-dews or Honey-dews begin to fall.

Mind your Sheep, as was advised before in May, and make the first return of fat Cattle.

Work to be done in the Orchard and Kitchen-Garden.

Now begin to inoculate, and beware of cutting of Trees other than the young Shoots off this Year, pluck off Buds where you are not willing they should branch forth.

Water your latter planted Trees, and lay moist Weeds, &c. at the Roots of them, having first cleared them of Weeds, and a little stirred the Earth, and hoe up all such Weeds as grow in your Nursery.

This is a seasonable time to distil Aromatick and Medicinal Herbs, Flowers, &c. and to dry them in the shade that you design to keep dry for the Winter, gathering of them in the Full of the Moon; also to make Syrups, &c.

Gather Snails, Worms, &c. and destroy Ants; kill Insects and other Vermin; set Saffron, plant Rosemary and Gilliflowers, sow Lettice, Chervil, Radish, and other Sallets for latter Salleting.

Gather



Sun {rises 3<sup>h</sup> 5<sup>m</sup>} ☽ } hath days } Long. 16<sup>h</sup> 17<sup>m</sup> 37 I  
 sets 8 9 } JUNE } XXX.

Gather Seeds that are ripe, and preserve them cool and dry, water dry Beds, and take up the bulbous Roots of Tulips, Anemonies, &c.

Inoculate Jessamines, Roses, &c. also transplant any sort of bulbous Roots that keep not well out of the Ground. Now plant Slips of Myrtle, and sow latter Pease.

You may now also (or in May before) cleanse Vines of exuberant Branches and Tendrils, cropping (not cutting) and stopping the second Joint immediately above the Fruit, especially in young Vineyards, when they first begin to bear, and thence forward binding up the rest to Props.

Dig your Ground where you intend to Hop Garden, and bind such Hops to the Poles as the Wind hath shaken off.

Bees now swarm plentifully, therefore be very vigilant over them; they will requite your care.

### Fruits in prime, or yet lasting.

Jennetting (first ripe), Pippins, John Apples, Robillard, Apples. Red Fennovil, &c.

The Maudlin (first ripe), Madera, Green-Royal, St. Pears. Laurence Pear, &c.

Duke, Flanders, Heart Black, Red, White. Cherries.

Luke, Ward, Early Flanders, the Common Cherry, Spanish Black, Naples Cherries, &c.

Rasberries, Corinths, Strawberries, Melons, &c.



## JUNE.

**T**Ransplant autumnal Cyclamens if you Design their Removal, and gather the ripe Seeds of such Flowers as you intend to save, and preserve them dry: Shade your Carnations from the Sun; take up the best Anemonies and Ranunculus's after Rain, when the Stalk is withered, and dry the Root well. You may now begin to lay your Gilliflowers, and to inoculate Jasmine, Roses, &c. Take up your Tulip Roots; set slips of Myrtle in a moist place, also slips of Cytisus Lunatus that are of that Year's Shoot: You may also take up such Plants and Roots as endure not well, out of the Ground, and replant them again immediately; such as the early Cyclamen, Jacinth, Oriental, and other bulbous Jacinths, Iris, Fritillaria, Crown Imperial, Martagon, Muscaris, Dens caninus, &c. Water such Things as require it. Trim your Knots, and get your Garden into Order.

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*Flowers in prime, and yet lasting.*

Amaranthus, Antirrhinum, After Atticus, Amerius, Allobrogium, Asphodils, Amaranthus; Blattaria; Campanula, Cyclamen, Cyanus, Campions, Corn Flag, Citratum, Clamantis, Creticum, Carnations; Digitalis; Fraxinella, Ficus Indicus; Gladiolus, Gentiana, Genista of Spain; Horminum Creticum, Hieracium, Hesperis, Hellebore, Honey-Suckle, Hollyhoc, Hedisarum; Jasmine, bulbous Iris, Lentiscum, Lychnis, Larks Heels, Lime Tree, Lilies; Martagon, Millefoliums, Muscaria; Nasturtium Indicum,



Sun { rises 3<sup>h</sup> 51<sup>m</sup> } ☽ { hath days } Long. 16<sup>h</sup> 17<sup>m</sup> 373  
 { sets 8 0 } JUNE { XXX. }

dicum, Nigella, Night Shade; Oranges; Pansy, Phalangium, Pilosella, Palma Christi, Pomegranate, Poppies; Roses, Rosemary; Stock-Gilliflowers, Serpillum citratum; Trachelium, Thlaspi Creticum; Veronica, Viola pentaphyl.





**T**HE Earth now would be glad of refreshing showers to moisten the scorched Vegetables. Tempests now much injure the laden Fruit-trees and standing Corn, to the great detriment of the Husbandman.

Now is the universal time for Hay-making: Lose not a good opportunity, especially if Fair-weather be scarce.

Mow your Head-lands and try-Fallow where the Land requires it. Gather the Fimble or earliest Hemp and Flax.

At the latter end of this Month Corn-Harvest begins in most places in a forward Year. Still carry forth Marl, Lime, and other Manure: Bring home Timber, Fewel, and other heavy Materials.

Wheat and Hops are now subject to much damage by Mildews.

Sow Turnep-feed in this Month, and sell such Lambs as you have fed for the Butcher.

Work to be done in the Orchard and Kitchen-Garden.

This is the chief time to inoculate choice Fruit, Roses, &c. and for the Summer pruning of Wall-trees for the Cherry-wine, Raspberry-wine, &c.

Re-prune Apricocks and Peaches, saving as many of the young likeliest Shoots as are well placed, for the new Bearers commonly perish; the new ones succeeding cut close, and even purging your Wall-fruit of superfluous Leaves, which keep the Fruit from the Sun; but do it discreetly.

Graft by Approach, and inoculate Jessamines, Oranges, &c.

Cut off the Stocks of such Flowers as have done blossoming, and cover their Roots with new fat Earth.

Sow Sallet Herbs for latter Salleting, and also Pease.

Take away Snails from Mural-trees, Slip-stocks, and other lignous Plants and Flowers. Lay Gilliflowers and Carnations for increase, watering of them, and shadowing of them from the fervent heat of the Sun-beams. Lay also Myrtles and other curious Greens. Clip Box and other tansil Plants.



Sun { rises 4<sup>h</sup> 0<sup>m</sup> { ☉ } hath days } Long. 15<sup>h</sup> 59<sup>m</sup> 375  
 { sets 8 0 { JULY } XXXI.

Let your Olitory Herbs run to Seeds that you design to save. Transplant or remove Tulips or other bulbous Roots; some may be kept out of the Ground, and others immediately planted.

Towards the latter end of this Month, visit your Vines again, &c. and stop the exuberant Shoots at the second Joint above the Fruit (if not done before) but not so as to expose it too much to the Sun without some Umbrage.

Keep down Weeds that they grow not to Seed, and begin your Work of Hoeing so soon as they begin to peep; by this means you will dispatch more in a few hours than afterwards in a whole day, in that the stirring of the Earth will but help the increase of the Seed.

If the Season be dry, the watering of Hops will very much advantage them, and make them the more fruitful; if it prove moist, renew and cover the Hills still with fresh Mould.

Now Bees cast their latter Swarms, which are of little advantage, therefore 'tis best to prevent them: Streighten the Entrance of the Hives, kill the Drones, Wasps, Flies, &c.

### Fruits in prime, or yet lasting.

Deux-ans, Pippins, Winter Russeting, Andrew Ap- Apples.  
 ples, Cinnamon Apples, red and white Jenneting, the  
 Margaret Apples, &c.

The primate Russet Pear, Summer Pears, Green Chissel Pears.  
 Pear, Pearl Pear, &c.

Carnation, Morella, Great Bearer, Morocco Cherry, Cherries.  
 the Egriot, Bigarreaux, &c.

Nutmeg, Habella, Persian, Newington, Violet, Peaches.  
 Muscat, Rambouillet.

Primordial, Myrobalan, the red, blue, and amber Plumbs.  
 Violet, Damask, Denny Damask, Pear-plumb, Violet &c.  
 or Cheson-plumb, Apricock-plumb, Cinnamon-plumb, the  
 King's-plumb, Spanish Morocco plumb, Lady Eliza-  
 beth's plumb, Tawny, Damascen, &c.

Rasberries, Goosberries, Corinths, Strawberries,  
 Melons, &c.



## JULY.

**F**ROM this time to *Michaelmas* you may lay Gil-  
 lifflovers and Carnations, and slip Stocks and  
 other Lignous Plants and Flowers. The Layers will  
 (in a Month or Six Weeks time) strike Root. Plant  
 six or eight in a Pot to save room in Winter; if it  
 prove wet lay your Pots side-long, but shade those  
 that blow from the Afternoon Sun.

You may still lay Myrtles, Laurels, and other  
 Greens.

Water young planted Shrubs, and Layers, &c. as  
 Orange Trees, Myrtles, Granades, especially Amo-  
 mum, which Shrub you can hardly water too often :  
 It requires also abundant compost; as does also the  
 Myrtle and Granade Trees. Clip Box, &c. after  
 Rain, and graft by approach *Inarch*, inoculate Jas-  
 mine, Oranges, &c.

Take up your early autumnal Cyclamen, Tulips,  
 and bulbous Roots, gather Tulip Seeds, but let them  
 lie in the Pods, and also early Cyclamen Seed, and  
 sow it presently in Pots.

Remove seedling Crocus, and place them at wider  
 Intervals: Likewise you may take up some Anemo-  
 nies, Ranunculus's, Crocus, Crown Imperial, Persian  
 Iris, Fritillaria and Colchicum, but plant the three  
 last as soon as taken up, or you may stay till *August* or  
*September* before you do it. Remove Dens Caninus,  
 &c. and take up your Gladiolus the Blades being dry,  
 and about the latter end of this Month sift your Beds  
 for Off-sets of Tulips and other bulbous Roots; also  
 for Anemonies, Ranunculus's, &c. which will pre-  
 pare it for replanting. You may sow some Anemo-  
 nies, keeping of them temperately moist.

Continue to cut off the withered Stalks of your  
 Lower Flowers, and cover with Earth the bared  
 Roots.

You



Sun. { rises 4<sup>h</sup> 0<sup>m</sup> } ☉ { hath days } Long. 15<sup>h</sup> 59<sup>m</sup> 377  
 { sets 8 0 } JULY { xxxi. }

You may now water your Gravel Walks with Brine, Pot Ashes, or a Decoction of Tobacco Stalks to destroy the Worms and Weeds.

*Flowers in prime, or yet lasting.*

Amaranthus, Asphodil, Antirrhinum, Flos Africanus, Alkekengi, Agnus castus, Arbutus, Amomum Plinij; Balsome Apple; Campanula, Clematis, Cyanus, Convolvulus, Corn Flower, Caryophyllata, Flos Cardinalis; Digitalis; Eryngium Planum; Fraxinella; Geranium Triste, Gladiolus, Gentiana; Hesperis, Hedysarum, Hollyhoc; Jacea, Jasmine, Jacinth; Lupines, Limonium, Linaria Cretica, Ligustrum; Millefolium, Musk Rose, Myrrh, Peru, Monthly Rose; Nasturtium Ind. Nigella; Oleander, Orange, Olive; Ind. Phaseolus, Prunella, Phalangium, Periploca, Flos Passionis; Scorpium Grass, Stock-Gilliflower, Scabious, Spartum Hispanicum; Tilia Ind. Tuberous; Veronica, Volubulis, &c.



*This*



**T**HIS Month returns the Country-man's Expences into his Pocket, and encourages him to another Year's Adventure. If it proves dry, warm, and free from high Winds, it saves a great deal of the Husband-man's Expence.

You may yet tri-fallow, also lay on your Compost or Soil, as well on your Barley Land as Wheat Land.

Carry Wood, or other Fuel home, before Winter.

Provide good Seed, and picked well, against Seed time.

Put your Ewes and Cows you like not to fatting.

This is the principal Month for Harvest for most sorts of Grain, therefore make use of good Weather whilst you have it.

About the end of this Month you may mow your After grass, and also Clover, St. Foyn, and other French Grass. Geld Lambs, and make the second return of your fat Sheep and Cattle.

Work to be done in the Orchard and Kitchen Garden.

The former part of this Month is the best time to inoculate. You may now make Cyder of Summer-fruits. Prune away superfluous Branches from your Wall fruit-Trees; but leave not your Fruit bare, except the Red Nectarine, which is much meliorated by lying open to the Sun, nailing up what you design to spare to cover the Defects of your Walls.

Pull up Suckers from Roots of Trees, unbind the Buds you inoculated a Month before, if taken.

Plant Saffron; set Slips of Gilliflowers; sow Annise. Now is beginning a second Season for the increasing and transplanting of most Flowers, and Garden Plants and Herbs, Strawberries, &c.

The Seeds of Flowers and Herbs are now to be gather'd: Also gather Onions, Garlick, &c.

Sow Cabbage, Colliflowers, Turneps, and other Plants, Roots and Herbs, for the Winter, and against Spring; and also Endive, Angelica, Scurvy-grass, &c.



Now sow Lark-beels, Candy-tufts, Columbines, &c. and such Plants as will endure the Winter.

You may yet slip Gilliflowers, and transplant bulbous Roots: About Bartholomew-tide, some esteem the only secure Season for removing of Perennial, or Winter-green, as Phillyreas, Myrtles, &c. It is also the best time to plant Strawberries; and 'tis not amiss to dress Roses that have done bearing, and plant them about this time.

Prop up those Poles the Wind blows down: Also near the end of the Month gather Hops.

Towards the end of the Month take Bees, unless the goodness of the Weather provoke you to stay till the middle of the next Month. Destroy Wasps and other Insects; and straiten the Passages to secure them from Robbers.

### Fruits in prime, and yet lasting.

The Ladies-longing, Kirkham Apple, John Apple, Apples. Seaming Apple, Cushion Apple, Spicing May-flower, Sheeps snout.

Windfor, Sovereign, Orange, Bergamot, Slipper Pear, Pears. Red Catherine, Ring Catherine, Penny Pear, Prussia Pear, Summer Poppering, Sugar Pear, Lording Pear, &c.

Roman Peach, Man Peach, Quince Peach, Ram-Peaches. bouillet, Musk Peach, Grand Carnation, Portugal Peach, Crown Peach, Bourdeaux Peach, Lavar Peach, Peach Despot Savoy, Malacota.

The Muroy Nectarine, Tawny, Red Roman, Little Nectarine, green Nectarine, Cluster Nectarine, Yellow Nectarine. rines, &c.

Imperial Blue, Dates, Yellow late Pear-Plumb, Black Plumbs. Pear-plumb, White Nutmeg, Late Pear-plumb, Great Anthony Turkey-plumb, the Jane-plumb.

Cluster Grape, Muscadine, Corinths, Cornelians, Other Mulberries, Figs, Filberts, Melons, &c. Fruits.







Sun {rises 4<sup>h</sup> 43<sup>m</sup>} {sets 7 17} AUGUST {hath days} {xxx.} Long. 14<sup>h</sup> 33<sup>m</sup> 38 I

Vernum, Convolvulus's, Colchicum, Catch Fly; Datura Turcica, Daffies, Delphinium, Eliochryson, Eryngium Planum; French Mary-golds; Geranium Creticum, Geranium nocte olens; Hieracion minus Alpestre, Tuberosc Hyacinth, Hearts Ease, Heliotrope, Holly-hoc, Helleborus; Spanish and Indian Jasmine; Limonium, Linaria, Lychnis, Lupines, Leucoion; Malva Arborefcens, Martagon, Myrtles, Maracoc; Nigella, Nasturtium Indicum; Oranges, Mirabile Peruvian, Pansies, Pomegranates; Musk and Monthly Roses, Rosemary; Thlaspi Creticum, &c.



Gentle



**G**entle Showers now do well, and make the Earth mellow, preparing of it for *Wheat*, which delights in a moist Receptacle; but still *Weather* and dry is most seasonable for the *Fruits* yet on the *Trees*. The *Salmon* and *Trout* in most *Rivers* go now out of Season till *Christmas*.

This Month is the most universal time for the Farmer to take Possession of his new Farm. Get good Seed, and sow *Wheat* in the *Dirt*, and *Rye* in the *Dust*.

Mend the Fences about the new-sown Corn; scare away Crows, Pigeons, &c.

Geld Rams, Bulls, &c. Sew Ponds: Put Boars up in the Sty.

Beat out Hemp-seed, and water Hemp; gather Mast, and put Swine into the Woods.

Carry home Brakes, saw Timber and Boards, and manure your *Wheat* Lands before the Plough. Thatch your Stacks and Ricks, and make an end of Carting.

Work to be done in the Orchard and Kitchen Garden.

You may now make Cyder and Perry of such Fruits as are not lasting, and gather your forwardest Fruit, but not your lasting *Winter* Fruit 'till after *Michaelmas*. Also gather your *Windfals* every Day that is dry.


Release inoculated Buds, if not done before, especially if they pinch.

Sow Cabbages, Colliflowers, Turneps, Onions, &c. Transplant Artichokes and Asparagus Roots, and Strawberries out of the Woods. Plant forth your Cabbages and Colliflowers that were sown in August, and make thin the Turneps where they grow too thick.

Now plant your Tulips, and other bulbous Roots you formerly took up; or you may now remove them: You may also transplant all fibrous Roots.

Now withdraw your choice Plants into the Conservatory, and shelter such Plants as are tender, and stand abroad.



Sun } rises 5<sup>h</sup> 41<sup>m</sup> }  } hath days } Long. 12<sup>h</sup> 37<sup>m</sup> } 383  
 S } sets 6 19 } SEPT. } XXX. }

*Towards the end of this Month you may gather Saffron, and Earth up your Winter Plants and Sallet Herbs; and prepare Compost to trench your Earth and Borders with.*

*Now finish the gathering and drying of your Hops, cleanse the Poles of the Hawm, and lay up the Poles for next Spring.*

*Take your Bees in time; straighten the Entrance into the Hives, and destroy Wasps, &c. Also you may now remove Bees.*

### Fruits in prime, and yet lasting.

*The Belle-boone, the William Pearmain, Lording-Apple, Pear-Apple, Quince-Apple, Red-greening, Ribbed bloody Pippin, Harvey Violet Apple, &c.* Apples.

*Hampden's Burgamot (first ripe,) Summer Bon Chretien Norwich, Black Worcester (baking) Green-field, Orange Burgamot, the Queen-hedge Pear, Lewis Pear, (excellent to dry,) Frith Pear, Arundel Pear (also to bake,) Brunswick Pear, Winter Poppering, Bing's Pear (baking) Diego, Emperor's Pear, Bluster Pear, Messire Jean, Rowling Pear, Balsom Pear, Bezy D' Hery, &c.* Pears.

*Malacoton, and some others, if the Year prove backward, Almonds, Quinces, &c.* Peaches.

*Little blue Grape, Muscadine Grape, Frontiniac, Parsly, great blue Grape, the Verjuice Grape (excellent for Sauce, &c.) Barberries, &c.*

SEPTEMBER



## S E P T E M B E R.

**Y**OU may now plant some sorts of Anemonies for early Flowers; but if you stay till next Month they will be more certain of growing. This is the best time of sowing Auricula Seeds, setting of the Cases in the Sun till *April*.

Plant Daffodils and Colchicum, and transplant Hepatica, Camomile, Capillaries, Matricaria, Violets, Primroses, Iris, Chalcedon, Cyclamen, &c.

You may continue to sow Alaternus, Phillyrea, Iris, Primroses, Crown Imperial, Martagon, Tulips, Delphinium, Nigella, Candy Tufts, Poppy, and such Annuals as are not prejudiced by Frosts.

Remove Seedling Digitalis, and plant the Slips of Lychnis; remove your Tuberoses into the Conservatory, and keep them dry. 'Tis best to take them out of the Pots, and to preserve them dry in Sand, or wrap them up in Papers, and keep them in a Box near the Chimney.

Bind up your Autumnal Flowers and Plants to Stakes for fear of suddain Gusts. Take off your Gilliflower Layers, Earth and all, and plant them in Pots or Borders shaded.

Crocus may now be raised of Seed.

In fair Weather when your Greens and Plants are dry, as Oranges Limons, *Indian* and *Spanish* Jasmine, Oleanders, Barba Jovis, Amomum Plinii, Citysus Lunatus, Chamelæa Tricoccos, Cistus Leden, Clusii, Dates, Aloes, &c. remove them into the Conservatory, and take away some of the Top exhausted Earth, and stirring up the rest, fill the Cases with what is rich, and well prepared, to nourish the Roots in Winter; but as yet leave the Doors and Windows of the Conservatory open to give them Air, provided the Winds be not too sharp and high, nor the Weather



SUN {rises 5<sup>h</sup> 41<sup>m</sup>} SEPT. {hath days} XXX. Long. 12<sup>h</sup> 37<sup>m</sup> 385  
 S {sets 6 10}

ther foggy. Myrtles will endure abroad near a Month longer.

When the Cold advances, set such Plants as will not endure the House into the Earth two or three Inches lower than the Surface, in a warm Place, and cover them with Glasses, having first cloathed them with dry Moss; but upon all warm and benign Emissions of the Sun, and sweet Showers, give them Air by taking off their Covers. Thus you may preserve Marum Syriacum, Cistus's, Geranium nocte olens, Flos Cardinalis, Marococs, choicest Ranunculus's, Anemonies, Acacia Ægypt, &c.

*Flowers in prime, or yet lasting.*

Amaranthus, Anagallis, Antirrhinum, Africanus Flos, Amomum Plinii, Aster Atticus, Asphodils; Belvedere, Bellis, Balauſtia; Campanula's, Colchicum, Autumnal Cyclamen, Clematis, Chryſanthemum Auguſtifol. Convolvulus diverſi Generis, Candy Tufts, Crocus, Capſicum Ind. Dature; Eupatorium of Canada, Ethiopic Apples; Geranium Creticum, Gentiarella annual, Gilliflowers; Hieracion Indicum; Jacinth, Jaſmine; Linaria Cretica, Lychnis, Conſt. Limonium, Ind. Lily; Marvel of Peru, Millefolium, Moly, Malva Arboreſcens; Naſturtium, Narciſſus of ſeveral ſorts; Oranges; Phalangium, Ind. Phaſeolus, Poppy, Ind. Pink, Paſſion Flower; Portugal Ranunculus, Rhododendron; Veronica, &c.



**O**CTOBER often gives an earnest of what we are to expect from the succeeding Winter.

If it prove *Windy*, as it usually doth, it finishes the fall of the Leaf, and also shakes down the Mast and other Fruits, leaving neither Leaf nor Fruit.

Lay or Plow up your Barley Land as dry as you can. Seed time yet continues, especially for *Wheat*.

Well Water furrow, and Drain new sown Corn Land. Now it is a good time to sow Acorns, Nuts, or other sorts of Mast or Berries for Timber, Coppice-wood or Hedges. You may still gather Saffron.

Sow Pease in a warm fat Land, you may plant Quicksets, and all sorts of Trees for Ornament or for Use, and also plash quick Hedges.

Wean the Foals that were foaled of your Draught Mares; at Spring put off such Sheep as you have not Wintering for.

Follow Malting, this being a good time for that Work.

Spare your private Pastures, and eat up your Corn Fields and Commons, give over folding of Sheep, and separate the Lambs from the Ewes that you design to keep for your own use.

Work to be done in the Orchard and Kitchen-Garden.

Make Cyder and Perry of Winter Fruit throughout this Month; now is a very good time to plant all sorts of Fruit-Trees, or any other Trees that shed their Leaf.

Trench stiff Grounds for Orcharding and Gardening to lie for a Winter fallowing. Now is the time for Ablaqueation, or laying open of the Roots of old or unthriving Trees, or such as spend themselves too much or too soon in Blossom.

Gather the residue of your Winter-Fruit, also gather Saffron.

Sow all sorts of Fruit-Stones, Nuts, Kernels and Seeds, either for Trees or Stocks; some also sow Pease in a rich warm Soil to be early in the Spring; and you may yet sow Genoa Lettice, which will last all the Winter, and Parsnips. Choose no Trees for a Wall that are not above two Years grafting.

Many of the September Works may be yet done, if the Winter be not too forward.



Sun {rules 6<sup>h</sup> 24<sup>m</sup> { M } hath days } Long. 10<sup>h</sup> 47<sup>m</sup> 387  
 {sets 5 36 { OCT. } XXXI.

*Now plant your bulbous Roots of all sorts, and continue planting and removing several Herbs and Flowers, with fibrous Roots, if a former and better Season be omitted.*

*This Month is the best time to plant Hops, and you may Hops. bag or pack those you dried the last Month.*

*Now you may safely remove Bees.* Bees.

*Fruits in prime, or yet lasting.*

*Belle and Bonne William Costard, Lording, Parsley Apples. Apples, Pearmain, Pear-apple, Honey-meal, &c.*

*The Law-pear (baking), Green Butter-pear, Thorn-Pears. pear, Clove-pear, Rouset-pear, Lombert-pear, Russet-pear, Saffron-pear, Violet-pear, Petworth-pear, or Winter-Windsor.*

*Bullace, and divers of the September Plumbs and Grapes, Pines, Arbutus, &c.*

*Continue sowing what you did in September; likewise Cyprus may be sown, but not during Frosts. Plant Ranunculus's, Vernal Crocus's, &c. Move Seedling Holly-hocs, or others.*

*Plant now your choice Tulips, &c. This is the securest time; and take care your Carnations do not get too much Wet. All sorts of bulbous Roots may now be buried, likewise Iris's, &c.*

*You may yet sow Alaternus and Phillyrea Seeds. Beat, Roll, and Mow your Walks and Camomile. Finish your last Weeding, and cleanse your Garden of Trumpery.*

*Flowers in prime, or yet lasting.*

*Amaranthus Tricolor, &c. After Atticus, Amomum, Antirrhinum, Arbutus; Balauft; Colchicum, Cyclamen, Clematis; Gilliflowers, Geranium triste; Heliotropes; Tuberoſe, Jacinth, Jasmine; Limonium, Lychnis; Marvel of Peru, Millefolium luteum, Myrtles; Nasturtium Perſicum; Oranges; Phalangium, Pilofella; Stock Gilliflowers; Violets, Veronica, &c.*



**T**HIS Month generally proves dry, and the Earth and Trees are wholly unclothed. Sowing of Wheat on a conclusion is yet allowable on very warm rich Land, especially such as are Burn-baited.

The Countryman now generally forsakes the Fields, and spends his time in the Barn and Market.

Fat Swine are now fit for slaughter, lessen your stocks of Swine and Poultry.

Thrash not Wheat to keep till March, lest it prove foisty.

Lay Straw or other wast stuff in moist places to rot for Dung; also lay Dung on heaps.

Fell Coppices, Wood and Trees for Mechanick Uses, as Plough-boot, Cart-boot, &c. and plant all sorts of Timber or other Trees; break Hemp and Flax.

Now you may begin to overflow your Meadows that are fed low, and to destroy Ant-Hills.

Work to be done in the Orchard and Kitchen-Garden.

Pease and Beans may now be set to be early in the Spring. Trench or Dig Garden Ground.

Remove and plant Fruit-Trees, and furnish your Nurseries against Spring.

Lay up Carrots, Parsnips, Cabbages, Colliflowers, &c. either for your Use, or to transplant for Seed at Spring; cover Asparagus Beds, Artichokes, Strawberries, and other tender Plants with long Dung, Horse litter, Straw or such like, to preserve them from Frost. Dig up Liquorish.

Now is the best Season to plant the fairest Tulips, if the Weather prove not very bad.

Cover with Mattresses, Boxes, Straw, &c. your tender Seedlings. Plant Roses, Lilac, and several other Plants and Flowers, the Weather being open.

Take up your Potatoes for Winter spending, trench and fit your Ground for Artichokes, &c. as yet you may sow Nuts, Stones, &c.

Hops.

Now carry Dung into the Hop Garden, and mix it with Earth that it may rot against Spring.

Apiary.

You may this Month close stop up your Bees, so that you leave breathing Vents, or you may House them till warm Weather.



Sun { rises 7<sup>h</sup> 34<sup>m</sup> { } hath days } Long. 8<sup>h</sup> 52<sup>m</sup> 389  
 { sets 4 26 { Nov. } xxx.

Fruits in prime, or yet lasting.

*The Belle Bonne, the William, Summer Pearmain, Apples. Lording Apple, Pear Apple, Cardinal, Winter Chesnut; Short Start, &c. and some of the former Months.*

*Messire Jean, Lord Pear, Long Burgamot, Warden (to Pears. bake) Burnt Cat, Sugar Pear, Lady Pear, Ice Pear, Done Pear, Deadman's Pear, Winter Burgamot, Belle Pear, &c. Arbutus, Bullaces, Medlars, Servises.*

Sow Auricula Seeds. Cover your peeping Ranunculus's, &c. and your over Green Seedlings, especially if the Snows be long, and the Winds sharp.

Now is the best time to plant your fairest Tulips in places of Shelter. Transplant ordinary Jasmine, &c.

About the middle of this Month uncover your tender Plants in your Conservatory, secluding all entrance of Cold. If the Weather prove very Cold, so as to freeze Water in your Conservatory, kindle some Charcoal: At other times, while the Sun shines on the House, and no longer, shew them the light. You must never water Aloes or Sedums during the whole Winter. If they grow too dry expose them a while to the Air when 'tis clear, and you can hardly be too sparing of Water to most of your housed Plants, which should be done only when the Leaves shrivel and fold up. If pale and whitish the fault is in the Roots.

House your best Carnations, or rather set them in a Pent-house against a South Wall, to keep them only from the extremity of the Weather.

Prepare also Mattresses, Boxes, Pots, &c. for shelter for your new Sown under Plants and Seedlings. Plant Roses, Althæa frutex, Lilac, Syringas, Citysus, Peonies, &c. and all fibrous Roots, set itony Seeds, &c. and cleanse your Walks and other Places of Autumnal Leaves, &c.

*Flowers in prime, or yet lasting.*

Anemonies, Antirrhinum; Bellis; Clematis, Carnation; Jasmine; Myrtles, Musk-Rose; Pansies; Meadow Saffron; Stock-Gilliflowers; Violets, Veronica, &c.



**T**HE Earth is now commonly locked up under its frozen Coat, that the Husbandman hath leisure to sit and spend what Store he hath before-hand provided.

Now is the time to house old Cattle, and to cut all sorts of Timber, and other Trees for Building, or other Utenfils; to fell Coppices, &c.

Let Horses blood, fatten Swine and kill them. Destroy Ant-hills.

Plow up your Land that you design for Beans; drain Corn-fields where Water offends, and water or overflow Meadows.

Put your Sheep and Swine to the Pease-rick, and fat them for a Market. Cut Hedges and Trees.

Work to be done in the Orchard and Kitchen-Garden.

You may now set or transplant such Fruit or other Trees as are not very tender, nor subject to the Injuries of Frost in open Weather.

Also you may plant Vines, or other Slips or Cions, and Stocks for Grafting; and also prune Vines, if the Weather be open.

Cover the Beds of Asparagus, Artichokes, and Strawberries with Horse-litter, &c. if not covered before.

Sow Beans and Pease, if the Weather be moderate. Trench your Ground, and dress it against Spring.

Set Traps for Vermin, and pick up Snails out of the holes of Walls, &c.

Sow or set Bay-berries, Laurel-berries, &c. dropping ripe. This Month you may dig up Liquorice.

Hop-garden.

Dig a weedy Hop-garden, and carry Dung into it, which mix with Earth.

Apiary.

Feed weak Stocks.

Fruits in prime, or yet lasting.

Apples.

Russeting Pippin, Leather-coat, Winter red Chestnut Apple, Great-belly, the Go-no-farther, or Cats-head, with some of the precedent Month.

Pears.

The Squib Pear, Spindle Pear, Doyoniere, Virgin, Gascoigne-Bergamot, Scarlet Pear, Stopple Pear, White, Red, and French Wardens (to bake or roast), &c. Deadman's Pear, excellent, &c.



Sun { rises 8<sup>h</sup> 50<sup>m</sup> } W } hath days } Long. 7<sup>h</sup> 40<sup>m</sup> 39 I  
 sets 3 10 } DEC. } XXXI.

## DECEMBER.

**C**ontinue to destroy Vermin, and preserve from too much Rain and Frost your best Anemonies, Ranunculus's, Carnations, &c.

You may sow for early Beans, Pease, &c.

Be careful to keep the Doors and Windows of your Conservatory well matted and guarded from the piercing Air; for if your Orange Trees and other tender Plants take cold, it will be difficult to recover them; therefore temper the Cold with a few Charcoal, but never accustom your Plants to it but in the extreamest Colds, for if the place be very close, they will even then hardly require it.

Set Bay-berries, &c. prepare Litter to lay over your choice Plants that are to continue abroad, and to cover your Pipes with in case of Frosts.

*Flowers in prime, or yet lasting.*

Anemonies, Antirrhinum; Winter Cyclamen; black Hellebore; Iris Clusii; Laurustinus; Primroses; Snow-drops, Stock-Gilliflowers; Yacca, &c.





# A T A B L E.

		<i>in the Kitchen-Garden</i>	
<b>A</b>			121
<i>Bell Tree</i>	48	<i>Althea Fruticosa</i>	180
<i>Acacia</i>	179	<i>Amonium Plinii</i>	192
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